UNIVERSIDADE DE LISBOA

ISEG Lisbon School of Economics & Management

The integration of quality management in higher education

Maria João Paiva Manatos

Supervisors: Prof. Doctor Cláudia Sofia Sarrico Ferreira da Silva

Prof. Doctor Maria João Pires da Rosa

Thesis especially written to obtain the Doctoral Degree in Management

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To Bruno, Ema, Ester and Raul

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Abstract

The purpose of our research is to look for theoretical and empirical evidence of the trend towards the integration of quality management in universities. We understand integration as the development of quality management as part of organisations' global management systems, covering different processes, organisational levels and quality management principles. Our main purpose is operationalised in four specific goals, which aim to understand whether: i) there is a trend in the literature towards the integration of quality management in higher education; ii) the European Standards and Guidelines (ESG) is an integrative quality management model; iii) the ESG are important and are being implemented in universities; and iv) universities are developing their quality management systems in an integrated manner.

Our research is developed in four main stages, corresponding to four main research goals, which we answer using different methodological approaches, developed in four research papers. We triangulate multiple sources of data: quantitative and qualitative, using different methodological strategies: survey and case study, different data collection techniques: systematic literature review, questionnaire and semi-structured interview; and different data analysis techniques: content analysis and descriptive and inferential statistics.

The literature seems to be approaching quality management in an integrated way but has to define the next step in the drive for a 'total' and effective integrative approach to higher education quality management. The ESG do not seem to effectively integrate all the core processes of universities and to be a systemic quality management model. The Portuguese academics have, however, positively 'welcomed' the ESG, consider that they are important and that they are to a large extent being implemented in their universities. Universities show positive signs of quality management integration but they still have some way to go to reach full integration.

This is an innovative study, which highlights a trend in quality management in higher education: that of integration, and it offers theoretical and empirical evidence as to the level and extent of the phenomenon.

Keywords: Quality management, Integration, Higher Education, Mix method approach

Resumo

O objetivo da presente investigação é procurar evidência teórica e empírica da tendência para a integração da gestão da qualidade nas universidades. A integração é entendida como o desenvolvimento da gestão da qualidade enquanto parte dos sistemas de gestão das organizações, cobrindo diferentes processos, níveis organizacionais e os princípios da gestão da qualidade. O objetivo central da investigação é operacionalizado em quatro objetivos específicos, que se traduzem em compreender se: i) há uma tendência na literatura para a integração da gestão da qualidade no ensino superior; ii) os European Standards and Guidelines (ESG) constituem um modelo de gestão da qualidade integrado; iii) os European Standards and Guidelines são importantes e estão a ser implementados nas universidades; iv) as universidades estão a desenvolver os seus sistemas de gestão da qualidade de um modo integrado.

A presente investigação é desenvolvida em quatro etapas principais, correspondendo a quatro objetivos de investigação, aos quais se respondem usando diferentes abordagens metodológicas, desenvolvidas em quatro artigos. São triangulados diferentes fontes de dados: quantitativas e qualitativas, diferentes estratégias metodológicas: inquérito e estudo de caso; diferentes técnicas de recolha de dados: revisão sistemática de literatura, questionário e entrevista semi-estruturada; e diferentes técnicas de tratamento de dados: análise de conteúdo e diferentes técnicas estatísticas.

A literatura parece estar a abordar a gestão da qualidade de um modo integrado mas terá ainda que definir o próximo passo para uma abordagem integrada 'total' e eficaz ao ensino superior. Os ESG não integram eficazmente todos os processos das universidades e não são um modelo de gestão da qualidade sistémico. Os académicos portugueses estão, contudo, a 'acolher' positivamente os ESG, consideram que eles são importantes e que estão, até certo ponto, a ser implementados nas suas universidades. As universidades apresentam também sinais positivos de integração da gestão da qualidade mas ainda não atingiram a integração total.

Este é um estudo inovador, que destaca uma tendência na gestão da qualidade no ensino superior: a tendência de integração, e oferece evidência teórica e empírica, bem como o nível e extensão do fenómeno.

Palavras-chave: Gestão da Qualidade, Integração, Ensino Superior, Combinação de métodos

Chapter 1. Introduction

Concerns with quality in higher education are not new, however it was mainly since the late 1980s that the logic of accountability became inseparable from the higher education sector and the concerns with quality became more visible and relevant for the universities, the government and the society as whole. The demands for economic efficiency given resource constraints; the increasing role of market regulation; the "erosion of trust" in universities associated with the new managerialism and the new public management (Massy, 2003); and the massification within the higher education sector, led to the need of universities to justify the expenditure of public funds and to demonstrate 'value for money' (Deem, 1998; Rosa & Amaral, 2007).

Similarly "academics are encouraged 'to do more with less' and be more accountable for scarce resources" (Becket & Brookes, 2008, p. 46). The pressures come both from outside and inside of universities. Externally the pressures are exerted by funding bodies and external quality assurance agencies. Internally, the pressures are exerted by managers and administrators on academics and non-academic staff in universities (Deem, 1998).

Accordingly, at an European level, European entities, such as the European Association for Quality Assurance in Higher Education – ENQA (2015), have developed standards and guidelines for external and internal quality assurance (particularly, the Standards and Guidelines for Quality Assurance in the European Higher Education Area, ESG) in order to foster their development and implementation national and institutionally.

At a national level, "supra-institutional quality assurance schemes" have been developed and implemented, once external entities started to require them, and accreditation has arisen (Westerheijden, Hulpiaub, & Waeytens, 2007).

At an institutional level, emphasis has being put on developing internal quality management systems and on ensuring that the accreditation of the study programmes and of the internal quality management systems of universities is achieved (Westerheijden et al., 2007).

Simultaneously, the developments in European higher education towards the setting-up of quality management models and of internal quality management systems in universities seem to indicate a trend towards the integration of quality management in higher education (Manatos, Sarrico, & Rosa, 2015), if one assumes integration as the development of quality management practices which are part of organisations' global management systems, covering

different processes and organisational levels while including the implementation of a whole set of principles that underlies the definition of quality management.

The need for quality management integration in higher education has, in fact, been underlined in the literature, since "quality management must be driven by clearly defined goals and strategic plans and must be planned and managed with the same (...) thoroughness as any other organisational strategy" (Horine & Hailey, 1995, p. 16). Therefore, universities are expected to closely weave quality management initiatives into the strategic plans of institutions (Cruickshank, 2003).

Taking into account the evolution noticed in quality management in higher education, which seems to lead to the integration of quality management, the overall goal of our work is to look for theoretical and empirical evidence of the trend towards the integration of quality management in universities. Hence, our research question is: how far is there theoretical and empirical evidence of a trend towards quality management integration in universities? Our main goal is operationalised in four specific goals. Our goals are then to understand: i) whether there is a trend in the literature towards the integration of quality management in higher education; ii) whether the reference quality management model for European higher education institutions (European Standards and Guidelines, Part 1) is an integrative quality management model; iii) how do academics perceive the European Standards and Guidelines' importance and implementation; and iv) whether universities are developing integrative quality management systems.

In order to fulfil our goals, our research was conducted in four sequential stages, each one of them intended to answer one of the following research questions:

1. In the first stage, we aim to understand ***how the literature is approaching quality management in higher education and whether there is a trend towards an integrative approach***. A systematic literature review around the topic of integration of quality management in higher education is developed. Our thesis statement is that the quality management literature is evolving towards the idea of integration, and it is increasingly presenting and discussing broad and holistic approaches to quality, which are well integrated into their management and governance framework.

2. After exploring the literature approach to quality management in higher education and comprehending whether there is a trend towards the idea of integration, in the second stage we analyse one of the reference models for the European universities developing quality management systems: the European Standards and Guidelines. The second paper aims to

understand ***whether the Standards and Guidelines for Internal Quality Assurance are a truly integrated quality management model***.

3. After theoretically analysing the European Standards and Guidelines and understanding whether it represents an integrative quality management model, the third stage analyses ***how the seven standards and corresponding guidelines for internal quality assurance are being understood and implemented in universities based on academics' perceptions***. We believe that it is important to understand how one of the main groups of actors in the quality management systems of universities – the academics – are welcoming and reacting to the practices that are established in the European Standards and Guidelines, and if they perceive their universities to be implementing those practices.

4. After a particular focus on the reference model for the implementation of quality management systems in European universities, in the last stage of our research, we look for ***empirical evidence that universities are developing their different quality management systems comprehensively and integrating them in their broader governance and management systems, covering different processes, organisational levels and the principles of quality management***.

This is an innovative study, which highlights a trend in quality management in higher education: that of integration, and it offers theoretical and empirical evidence as to the level and extent of the phenomenon.

1.1. Quality management in higher education: particularities and challenges

The concern with quality in higher education gave rise to the discussion about the applicability of quality management principles, concepts, tools and models from business, and mostly from the manufacturing industry, to the context of public services, including higher education.

Quality is a multidimensional and complex construct, and consequently we "should not aim at a single definition of quality" and recognise "the multi-dimensional nature of quality" (Sousa & Voss, 2002, p. 95).

The assumption that applying the principles of quality management to all activities would result in considerably improved quality led to the development of a strategic and holistic approach to quality management, labelled Total Quality Management (Munro-Faure & Munro-Faure, 1992; Watson & Howarth, 2011). Total Quality Management, theoretically grounded in Deming's 14 points (1986), Juran's trilogy (1988) and Crosby's 14 steps (1979), has made its way, firstly, in industrial systems and other business settings worldwide, and later on, in the

public sector, namely in education. Total quality management can be understood as a systematic approach to the planning and management of activities, characterised by the definition of some general and inspiring guiding principles and core concepts that represent the way the organisation is expected to operate in order to obtain high performance (Campatelli, Citti, & Meneghin, 2011; Munro-Faure & Munro-Faure, 1992). Sherr and Lozier (1991, p. 6) highlight also that total quality management "is not a passive descriptive term but an energetic activity (…) of continuous process improvement."

Currently, there is a broad consensus that the notion of quality management rests on seven principles: i) focus on customers, their needs and requirements; ii) leadership and its role in establishing purpose and direction inside the organisation; iii) engagement of the people in the organisation; iv) process approach regarding all the activities and resources of the organisation and their management as interrelated processes that function as a coherent system; v) improvement as permanent objective of the organisation; vi) evidence-based and informed decisions; and vii) focus on the management of the relationships with the external stakeholders of the organisation (ISO, 2015).

The benefits and limitations of the applicability of quality management and its principles to the public sector, namely to higher education, as well the best ways to achieve quality in public services have been controversial topics of debate (Owlia & Aspinwall, 1996). The literature points out limitations related to the specificities of the education sector, but also favourable implications of the use of quality management models in higher education (Houston, 2010; Rosa, Sarrico, & Amaral, 2012; Srikanthan & Dalrymple, 2005; Venkatraman, 2007).

The higher education context has particularities which influence the way quality is approached and managed. The notion of quality, which is generally controversial and non-consensual can be particularly problematic when applied to higher education.

In higher education, quality is a relative concept, since it means different things to different stakeholders: students, teaching and non-teaching staff, employers, government, funding agencies, accreditors, auditors and assessors (Becket & Brookes, 2006; Harvey & Green, 1993; Houston, 2007; Sarrico, Rosa, Teixeira, & Cardoso, 2010).

The different notions of quality highlighted by Harvey and Green (1993) can be a good example of how special higher education can be when we think about quality. According to Harvey and Green (1993) there are different conceptualisations of quality, which can be grouped into five interrelated ways of thinking about quality: quality as exceptional, as perfection (or consistency), as fitness for purpose, as value for money and as transformative. The exceptional

notion of quality is linked with the notion of distinctiveness, excellence and conformance to standards. The view of quality as perfection or consistency means conformity with specifications with zero defects and getting things right first time. Here, notions of zero defects and getting things right first time involves a philosophy of prevention and responsibility embodied in the culture of quality, in which everybody is involved. The approach to quality as fitness for purpose suggests that quality only has meaning in relation to the purpose of the product or service. The notion of quality as value for money is focused on quality products and services at reduced costs. Finally, the transformative view of quality is rooted in the notion of qualitative change (Harvey & Green, 1993).

All these notions of quality have particular implications when applied to the higher education context. The notion of quality as exceptional presents limitations when applied to higher education since both excellence and compliance to standards imply that the quality of a service can be defined in terms of standards that are measurable and quantifiable, which is sometimes difficult in the case of higher education (Harvey & Green, 1993),

The view of quality as consistency, zero defects and 'getting things right first time' do not exactly fit the higher education context, since higher education is not about delivering specifications in as perfect as possible way, but "encouraging the analytical and critical development of students" (Harvey & Green, 1993).

The notion of quality as fitness for purpose, linked to the notion of meeting customers' requirements, also raises problems in the educational setting.

First, the notion of customer is problematic in higher education (O'Mahony & Garavan, 2012). It raises the question of who the customers are in higher education. Are they the students, the employers, the other internal stakeholders, the government, society at a large? Consequently, depending on the customer, the requirements, the needs and the expectations differ. Another difficulty arises from the dynamic and interactive nature of higher education, where students are simultaneously prime customers, suppliers, co-processors and products (Owlia & Aspinwall, 1996).

Second, the customer is not always able to specify what is required. Thus, the specifications are not only determined by the customer, but also by the provider. In this manner, quality can be defined in terms of the institution fulfilling its own purposes and mission (Harvey & Green, 1993). Moreover, there is an additional difficulty in higher education, which is to identify its purposes.

The notion of quality as value for money in higher education is in turn more and more related to the use performance indicators to monitor universities' efficiency and effectiveness, as the pressures for accountability rise. Notwithstanding, according to O'Mahony and Garavan (2012, p. 187) there is a conflict between quality for accountability and quality of learning, which can lead to an "over-focus on the implementation of processes that do not address a central issue: what is the quality of learning?" Often quality management systems in higher education have a major focus on quality for accountability purposes, while ignoring the quality of teaching, learning and research, which should be at the centre of any quality management system.

Finally, the notion of quality as transformative raises issues about the importance of a product-centred notion of quality, especially in higher education. Unlike other services, in higher education the process of transformation is not unidirectional, but a dialectical and negotiated process. This happens for example in research, where "the provider does not just produce new knowledge in a vacuum but is involved in transforming a given body of knowledge for particular purposes". Therefore, education is an "ongoing process of transformation", aiming to enhance and empower the "consumer" (Harvey & Green, 1993). Hence, the complicated, dynamic and intangible nature of the educational product is one of the reasons why quality is hard to manage (Becket & Brookes, 2008; Owlia & Aspinwall, 1996; Venkatraman, 2007).

Other particularities of higher education institutions, which differentiate them from the organisations from the business sector and even from other organisations from the public sector, make their management of quality particularly challenging.

Universities are traditionally fragmented and loosely coupled organisations (Cohen, March, & Olsen, 1972; Orton & Weick, 1990; Weick, 1976). According to Clark, universities have a loosely coupled structure because their primary production material is knowledge (Clark, 1983). They are characterised by "causal indeterminacy" and "unclear means-ends connections"; "fragmentation of external environment", due to "dispersed stimuli or incompatible expectations"; and "fragmentation of internal environment", where the participants are "constantly involved in every dimension of the organisation's operations" (Orton & Weick, 1990).

Moreover, there is a conflict between accountability, control and regulation, one the one hand, and professional autonomy and collegiality, on the other hand; and between learning improvement and bureaucratic control (Hoecht, 2006). Regarding these 'apparent' conflicts, Hoecht (2006, p. 556) underlines that "accountability and professional autonomy do not have to be polar opposites. A glance at the critical writings on quality management shows that it can

be tailored to promote learning and innovation rather than bureaucratic control. It also does not have to undermine professional autonomy."

The specific characteristics of higher education often drive sceptic positions, not only regarding the use of quality management models in higher education, but also, 'management' in a broader sense. In fact, the literature on the study of quality in higher education has mainly been based on sociology, educational science, political science or psychology, and less on management (Amaral & Magalhães, 2007). It tends to avoid reference to management, using terms as 'quality assurance' rather than 'quality management' which is rather odd from the point of view of the field of quality management research, as it reduces the scope of quality management to its assurance component. For instance, the European Standards and Guidelines (ENQA, 2015, p. 7) specifically highlight that "the term 'quality assurance' is used (…) to describe all activities within the continuous improvement cycle (i.e. assurance and enhancement activities)." Similarly, Bowden and Ference (1998) designate "the activities defined by the terms 'quality improvement', 'evaluation', 'follow-up', 'quality assessment', 'quality audit', 'quality control' and 'quality management'" as part of a "organization's quality assurance system". Other terms as 'customer' and 'market' also find resistance from some authors, who argue that they are only applicable to the business context (Owlia & Aspinwall, 1996).

According to the quality management literature, quality management embraces different 'components' or 'dimensions', such as planning, control, assurance and improvement (ISO, 2015; Watson & Howarth, 2011). Quality assurance relates to the planning and development of formal activities and managerial processes in an attempt to achieve the desired objectives. Hence, quality assurance includes all the planned and systematic actions which guarantee that a certain product or service will meet certain requirements (ISO, 2015). It does not integrate however, other components of quality management, such as continuous improvement (Elassy, 2015; Kerzner, 2009; Watson & Howarth, 2011).

The debate about the applicability of quality management tools to higher education has shown that its implementation could be a complex, or even a "herculean but potentially beneficial task if the implementation process is effectively undertaken" (O'Mahony & Garavan, 2012, p. 185). Rather than attempting to reduce complexity and provide universal solutions, the most important challenge throughout is: a critical thinking of quality and improvement (Houston, 2010); the adaptation and interpretation instead of a direct translation of the quality management models (Venkatraman, 2007); and the design of quality models in a language that

is “familiar to the culture of higher education” and which “could be adaptable to the mission” of universities (ENQA, 2009, pp. 16, 17). According to Houston (2010, p. 179), it is important to make commitments which “resonate with key ideas of higher education and (…) capture essential characteristics for achieving enhancement, rather than just monitoring, of quality in higher education.”

Despite the criticisms, there is a raising awareness of the potential benefits from the application of quality management principles to higher education. Principles such as continuous improvement, participation of internal stakeholders, satisfaction of customer needs and expectations and the existence of management procedures that reinforce quality, would be consensually considered relevant within the higher education context (Rosa, Saraiva, & Diz, 2005; Tarí & Dick, 2016; Williams, 1993).

The different methodologies and techniques embraced in the general philosophy of total quality management, which are used for different quality management activities, can be considered for application in the education area, since they all provide data and information that are essential for effective decision-making (Owlia & Aspinwall, 1996). As the authors state “the human-dominated nature of education cannot overshadow the necessity of informed decisions” (Owlia & Aspinwall, 1996, p. 163).

It seems that in recent years there has been an evolution in the quality debate in higher education. The increasing influence of both internal and external quality assurance and the development of national quality assurance systems have contributed to mitigate extreme positions and despite the predominance of the ‘quality assurance’ discourse, the references to quality management in higher education are currently common.

Even when the term is absent, its essence is present, when the importance of “creating and consolidating a bridge from assurance to a culture of improvement” is underlined (Houston, 2010, p. 178). After all, more than the mere assurance of quality, the development of a comprehensive and integrative quality culture and the continuous improvement of quality are inherent characteristics and aims of quality management.

1.2. Setting up quality management systems in universities: the developments in Europe and in Portugal

Under the umbrella of the “new public management” (Ferlie, Ashburner, Fitzgerald, & Pettigrew, 1996; Flynn & Strehl, 1996; Hood, 2000; Pollitt & Bouchaert, 2011), the “new managerialism” (Clarke, Gewirtz, & McLaughlin, 2000; Deem & Brehony, 2005; Newman &

Clarke, 1994) and the “evaluative state” (Neave, 1998), the organisation, the governance, the management, the funding and the social and public relevance of higher education have been changing since the late 1980s. The public relevance of higher education and the new social expectations on higher education, combined with concerns about its efficiency, effectiveness and quality are, from then on, what guide public policy making in higher education. In this context, the state has a proactive role in higher education, continually responding to the changing environment in the sector (Gornitzka, Kyvik, & Stensaker, 2005).

Hence, the ‘new public management’ defines new forms of administrative orthodoxy about how public services, including higher education, are run and regulated (Deem & Brehony, 2005; Hood, 1995). Similarly, the term ‘new managerialism’ is understood as “an ideological configuration of ideas and practices recently brought to bear on public service organisation, management and delivery, often at the behest of governments or government agencies” (Deem & Brehony, 2005, p. 219).

“It is important, however, to make a distinction between managerialism as an ideology for the strategic change of public services and the need to give higher education institutions a more flexible and effective administration (…) without assuming determinant roles in defining the institution’s goals and strategies” (Rosa et al., 2005, p. 205). The new managerialism should simply provide institutions with the tools to a more effective management and governance, maintaining their norms and traditions (Amaral, Magalhães, & Santiago, 2003; Meek, 2003; Rosa et al., 2005; Trow, 1994).

The term “evaluative state” is associated with the increasing institutional autonomy and with the growing influence of market mechanisms in the regulation and governance of universities, leading to an extensive accountability and scrutiny of universities’ activity (Neave, 1998; Sarrico et al., 2010). It designates the “evaluation of what higher education is doing, how it is doing it, at what cost and with what results achieved” and the “increasing reliance on procedures of 'exploratory evaluation' and attempts by dint of wholesale legislation to place the university on a new footing, to regulate access, curricular content, internal governance” (Neave, 1998, pp. 265, 268).

Irrespective of the designation or label used and of the fundamental differences between them, they represent “a move to devolved management of public services and their marketisation, accompanied paradoxically by both greater state regulation and fragmentation of service delivery” (Deem & Brehony, 2005, p. 220). According to Sarrico and colleagues (2010, p. 39), despite the “rhetoric that favours market regulation and the reduction of state

intervention", we observe a "de facto increase of intervention by the state", which should assure that universities, while competing in a market-like environment, are more responsive, more effective and more efficient (Amaral & Magalhães, 2001; Larsen, Maassen, & Stensaker, 2009; Magalhães, Veiga, Ribeiro, & Amaral, 2013). On the one hand, the increased role of markets (or quasi-markets), as a regulation mechanism for higher education, leads to a reinforced autonomy of universities "allowing them to have some 'market-like' freedom as providers of higher education and strengthening the degree of institutional competition in the system" (Sarrico et al., 2010, p. 38). On the other hand, to borrow from Magalhães and colleagues (2013, p. 248), it also leads to a "stronger and potentially more intrusive relationship between state and higher education institutions", and, consequently, to the development by governments of new mechanisms of control and monitoring of universities' activities (Dill & Soo, 2004; Sarrico et al., 2010; Sarrico, Veiga, & Amaral, 2013a).

Hence, national governments in Europe have explored new modes of governing higher education, inspired by the new public management and the new managerialism, but also influenced by intergovernmental agreements, more directly linked to higher education, such as the Bologna process (1999), and by supranational reform initiatives, broadly related to the knowledge-based economy, as the Lisbon agenda (2000) (Stensaker, Frølich, Gornitzka, & Maassen, 2008).

The process of academic standardisation and, more generally, the new reform agenda intended by Bologna, affects transversally different areas of higher education: funding, governance, curriculum and, naturally, quality management (Westerheijden et al., 2007). Globally, the Bologna process aimed at: adopting a system of easily readable and comparable degrees, essentially based on three main cycles; establishing a system of credits; promoting mobility; promoting European dimensions in higher education, such as curricular development, inter-institutional co-operation, mobility schemes and integrated programmes of study, training and research; and promoting the European co-operation in quality assurance (Bologna Declaration, 1999).

After the Bologna declaration, the successive communiqués from the European ministers of higher education indicate the concerns with the development of joint quality management mechanisms:

a) In the Prague Communiqué (2001, p.2) "ministers recognized the vital role that quality assurance systems play in ensuring high quality standards and in facilitating the comparability of qualifications throughout Europe", as well as the importance of developing

"national quality assurance systems," and of "establishing a common framework of reference."

b) In the Berlin Communiqué (2003, p. 3) "ministers commit themselves to supporting further development of quality assurance at institutional, national and European level" and agree "to develop an agreed set of standards, procedures and guidelines on quality assurance, to explore ways of ensuring an adequate peer review system for quality assurance and/or accreditation agencies or bodies."
c) The Bergen Communiqué (2005, p. 2) highlights the "efforts to enhance the quality of [higher education institutions'] activities through the systematic introduction of internal mechanisms and their direct correlation to external quality assurance."
d) The London Communiqué (2007, p. 4) emphasises that the Standards and Guidelines for Quality Assurance in the European Higher Education Area – adopted in 2005 (ENQA, 2005) – are a "powerful driver of change in relation to quality assurance."
e) The Leuven and Louvain-La-Neuve Communiqué (2009) highlights the creation of a European register for quality assurance agencies, the European Quality Assurance Register for Higher Education, in 2008.
f) The Budapest-Vienna Communiqué (2010) not particularly addressing quality management, but different measures and developments in higher education, stresses the need to a higher involvement of staff, students and other stakeholders.
g) The Bucharest Communiqué (2012, p. 2) revises the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ENQA, 2015) in order "to improve their clarity, applicability and usefulness, including their scope."
h) Finally, the Yerevan communiqué (2015, p. 3) prioritises the implementation of "agreed structural reforms" as a prerequisite for the consolidation of the European Higher Education Area, namely "common quality assurance standards and guidelines."

The European initiatives and orientations regarding quality management and the rise of a European Higher Education Area have decisively contributed, at the national level, to the development of national quality management mechanisms, especially the creation of national accreditation agencies.

In general, the national accreditation agencies review and accredit the study programmes of national universities and some agencies, such as the ones in Portugal, Spain, Finland, Norway or Austria, have also started to audit, certify or accredit the internal quality management systems of universities, based on compliance with the European Standards and Guidelines.

Influenced by European and national developments, universities all over Europe are developing and implementing their internal quality management systems, since, as stated above, the responsibility for quality management lies ultimately in universities, which provides "the basis for real accountability of the academic system within the national quality framework" (Berlin Communiqué, 2003, p. 3). The European Standards and Guidelines and the national accreditation agencies provide a set of guidelines in order to help universities develop their internal quality management systems, but each university can develop and implement its internal quality management system, according to their institutional mission and culture (ENQA, 2009; Rosa & Amaral, 2014; Santos, 2011).

In Portugal, the European developments in higher education, driven by the new public management and the new managerialism context, boosted the deep process of change of Portuguese higher education. Since the mid-1990s "there has been a change of emphasis from governing to governance(…), leading to tensions between institutional autonomy and the need for regulation, by governments, to ensure the achievement of policy objectives" (Rosa & Amaral, 2014, p. 154). However, it was only in 2007, that the higher education sector in Portugal witnessed substantive developments, setting up the conditions, structures and organisation of a more rigorous system of evaluation for higher education and complying with the European exigencies, namely the European Standards and Guidelines (Rosa & Sarrico, 2012). Those developments comprise: the legal regulations for degrees and diplomas and the establishment of the general principles of accreditation for universities and their study cycles (Portugal, 2006); a new legal framework for all universities, known by RJIES (Portugal, 2007c); the new legal regulations for the quality assessment in higher education (Portugal, 2007b); and the creation of the Agency for Assessment and Accreditation of Higher Education – A3ES (Portugal, 2007a).

In this context, Portuguese higher education policy emphasises the need: to improve the quality and relevance of the courses offered, to increase the autonomy of universities, to develop an accountability culture, and to structure an internationally recognised system of quality assurance, with a prominent role for A3ES (Decree-Law 369/2007).

Regarding the assessment and the accreditation of universities, the new legal framework states that universities must develop regular self-assessment mechanisms for their performance; and that their units and their pedagogic and scientific activities are subject to the national system for assessment and accreditation (Law 62/2007, Chapter 1, Article 133). In

this sense, Portuguese universities "must comply with the norms and procedures for assessment and accreditation defined by the Agency" (A3ES, 2009, p. 1).

According to the legal regulations on quality assessment in higher education, quality assessment aims to: improve the quality of universities, inform society about the performance of universities, and develop an institutional culture for internal quality assurance (Law 38/2007, Article 5).

A3ES is responsible for assessing and accrediting the study programmes of universities and for auditing and certifying their internal quality management systems. A3ES (2009, p. 3) aims to support "the implementation of internal quality assurance systems in institutions while it upholds the principle that the institutions must play a fundamental role in the reorganization, improvement and rationalization of their offer of study programmes", since the first responsibility for quality management lies with the institutions themselves, as outlined by the European Standards and Guidelines (ENQA, 2009).

Portuguese universities started to develop and to implement their internal quality management systems, influenced by the guidelines provided by A3ES, which, in their turn, are based on the European Standards and Guidelines and on three additional standards, related to research and development, external relations, and internationalisation. Indeed, the internal quality management systems of Portuguese universities are being developed very similarly, translating European and, mainly, national references (Cardoso, Rosa, & Videira, 2015; Rosa, Cardoso, Videira, & Amaral, 2016).

Some universities have already seen their internal quality management systems certified by A3ES and others are preparing for the certification, expecting a lighter touch assessment of their study programmes (Rosa & Amaral, 2014). A3ES has been promoting the development of internal systems and their certification, not only by providing the necessary guidelines, but also by pledging "to implement simplified accreditation procedures for those institutions that promote the implementation of internal systems and have performance indicators well above the minimum requirements" (A3ES, 2010, p. 7).

Hence, as a consequence of the attempt of universities having their systems certified and achieving a 'light-touch' in their external assessment, the internal quality management systems of Portuguese universities present no relevant differences (Cardoso et al., 2015).

An analysis of the internal quality management systems of Portuguese universities also seems to reveal an "emphasis on formal, structural and procedural aspects" (Tavares, Sin, & Amaral,

2015, p. 13) and a “great formalisation of procedures” (Rosa et al., 2016) which “is indicative of the understanding of quality more as a structural or managerial element with well-defined processes (…) and less as shared values and commitment to improvement” (Tavares et al., 2015, p. 13). Indeed, the practical effects of the internal quality management systems seem to be mostly related to increasing bureaucracy than to substantive improvements (Tavares, Sin, Videira, & Amaral, 2016).

Generally, the development and implementation of internal quality management systems is a result of the emphasis on performance and systematic monitoring, and of other broader changes underpinning European and national initiatives. Larsen and colleagues (2009, pp. 4, 5) would argue that the “increased emphasis on performance and output, and introduction of systematic evaluation activities for checking whether stated objectives are met”, together with: the “greater formalisation of roles and responsibilities especially concerning leadership”, “more power to the consumers”, and the “decentralisation of tasks from the central level combined with increased institutional autonomy”, constitute the main changes that the European and the national developments in higher education have brought to the institutional level.

1.3. Quality management integration in higher education: development of a theoretical framework

In the literature, one can find some attempts to define integration; some are however more successful than others. While, the article “What is integration?” (Gulledge, 2006), surprisingly contains no clear definition of the term, Garvin (1991, p. 87) states that the term integration generally designates “the degree of alignment or harmony in an organisation” and translates “whether different departments and levels speak the same language and are tuned to the same wavelength.” Other authors do not define integration in particular, but underscore the necessity of an integral, holistic and systemic thinking in management (Zink, 1998).

When linked to quality management systems, integration tends to represent the alignment of the quality management system with the strategy of the organisation (Bardoel & Sohal, 1999; Davies, 2008; Pardy & Andrews, 2010; Shih & Gurnani, 1997). The integration of a quality management system can then be achieved “through a combination of multi-level use in the organisation; using it as part of the strategic planning process; aligning its use with other organisational systems, linking its use with performance management and involving staff in its use through teams” (Davies, 2008, p. 396).

Pardy and Andrews (2010) argue that “an effectively implemented quality management system aligns policy with strategic and management system objectives” (Pardy & Andrews, 2010, p. 4). Furthermore, “implementing and maintaining an integrated quality management system can provide the opportunity to identify and create synergies, thereby reducing redundancies, increasing effectiveness, and maximizing efficiencies” (Pardy & Andrews, 2010, p. 6).

The literature indicates that linking a quality management system with the strategic planning processes of an organisation helps to integrate the quality management model into the organisation’s processes and to achieve its effective implementation (Bardoel & Sohal, 1999; Davies, 2008; Hansson, Backlund, & Lycke, 2003; Zink, 1998).

The integration of quality management systems is thus related to an effective implementation of those systems. While analysing industrial quality management programmes, Shih and Gurnani (1997) emphasise the importance of developing an integrated quality management system and conclude that the lack of integration of a quality management system is one of the causes for the unsuccessful implementation of that system. The authors consider that “the lack of proper integration with company strategy leads to unfocused quality efforts“ (Shih & Gurnani, 1997, p. 26). This amounts to saying that “integration, if achieved, can have a very positive effect on whether implementation is effective” (Davies, 2008, p. 396).

Another important factor “for reinvigorating the quality management system” is the integration of the quality management system with other improvement programmes, since a well-integrated quality management system “facilitates the continuous and participative design of all work processes and methods” (Shih & Gurnani, 1997, p. 29).

Moreover, an integrative approach to quality management, as well as the implementation of integrative quality management systems entails the adoption of the quality management principles. Indeed, an integrated quality management system must have a focus on the customers of the organisation; involve its main internal and external stakeholders; integrate ‘holistically’ all its processes and activities; achieve continuous improvement; and base the decision making process in facts (ISO, 2012).

As in industry, in higher education, the literature has been emphasising “the importance of linking quality efforts to a strategic plan” (Horine & Hailey, 1995, p. 12), and arguing that the successful implementation of quality management in higher education will not result from isolated and independent actions and/or the establishment of quality offices, but “from clearly defined goals and strategic plans”, at the same time that it must “be planned and managed (…)

as any other organizational strategy" (Horine & Hailey, 1995, p. 16). This idea led to the notion of "*embedding* quality assurance and improvement in the strategic planning process" (Dynan & Clifford, 2001, p. 512).

In this respect, Bagautdinova and colleagues (2013, p. 39) interpret a quality management system "as a universal system integrated as a key component in the unified management system of both strategic and operational levels."

The only logical conclusion one can arrive at in relation to a model for quality management in higher education is that it would have to be holistic to effectively meet the requirements of core functions of universities (Srikanthan & Dalrymple, 2002, 2004). The authors hereby underline the need to integrate in the quality management models for higher education the different processes of universities.

Consequently, Srikanthan and Dalrymple (2002) propose a "comprehensive educational model" which is a "holistic model" that can effectively meet the requirements of the different aspects of an educational organisation: service functions and education functions. The authors consider that such an approach to quality management in higher education has the potential for building synergy between educational and organisational studies (Srikanthan & Dalrymple, 2002, 2004). In this sense, "quality issues should not be something separated from, or added to, the work that is carried out at the university" (Bowden & Marton, 1998, p. 287).

Quality management integration in higher education mostly relates to the development of holistic quality management models for higher education (Srikanthan & Dalrymple, 2002, 2004, 2005, 2007); or to the theoretical and/or empirical discussion around the applicability of comprehensive and integrated quality management models and the principles of quality management to higher education (Bagautdinova et al., 2013; Doherty, 1993; Tarí, 2006). As described in previous sub-chapters, the strengths and the limitations of the development and the implementation of quality management models from industry to the higher education sector has been a topic of intensive debate.

Moreover, the European developments in higher education, namely the Bologna Process (Bologna Declaration, 1999) also stress a systemic and comprehensive approach to quality management (Vukasovic, 2014).

In this context, the European quality management models, namely the European Standards and Guidelines have been increasingly revealing signs of integration. Indeed, the policy for quality assurance described in the European Standards and Guidelines (for internal quality

assurance – Part 1) states that “institutions should have a policy for quality assurance that (…) forms part of their strategic management” and that “quality assurance policies are most effective when they (…) take account of (…) the institutional context and its strategic approach” (ENQA, 2015, p. 11). Simultaneously, the European Standards and Guidelines tend to integrate, even if in an unbalanced way, the different processes of universities: “learning and teaching”, “research and innovation”, “support activities and facilities” and “contribution for social cohesion, economic growth and global competitiveness”; and “all the levels of the institution”(ENQA, 2015).

Following the European Standards and Guidelines, the national guidelines for the development of the internal quality management systems of universities also seem to integrate, more and more, the different processes of universities: “teaching and learning”, “research and development”, “interaction with society”, “support services”; different organisational levels inside the universities; and “the relationship between the quality assurance system and the governance and management bodies of the institution”(A3ES, 2013).

In practical terms, integration in higher education also seems to be reflected in the way universities are being governed, managed and organised. Despite being traditionally fragmented and loosely coupled organisations (Cohen et al., 1972; Deem, 1998; Frølich, Huisman, Slipersæter, Stensaker, & Bótas, 2013; Orton & Weick, 1990; Weick, 1976), universities seem to be integrating their main processes and management practices.

The management context of universities seems to be increasingly integrated, leading to the centralisation of power in a small number of decision-making and governance bodies (Melo, Sarrico, & Radnor, 2010). Often, top executive bodies become smaller; collegial boards such as the academic senate or the university’s assembly are either absent or at the advisory level; and power tends to be concentrated in one person, such as the Rector or the director of organisational units (Brückmann, 2015; Brückmann & Carvalho, 2014; Sarrico, Veiga, & Amaral, 2013b; Shattock, 2003, 2006).

One of the governance reforms in higher education resulting from the new management context is translated into the setting up of integrated management structures. In this context, there is “a greater formalisation of roles and responsibilities especially concerning leadership often combined with stronger task specialisation” and dual structures are abandoned “in favour of integrated ones”, which according to some, makes the “whole decision-making process more transparent, accountable and streamlined” (Larsen et al., 2009, p. 6).

In sum, there seems to be a general trend towards the integration of quality management in organisations, including in universities, which seems to result from the evolution of the industrial quality management models, highlighting the need to integrate quality management in the strategy of the organisations; and, also, in the case of higher education, from the recent developments influencing the management, the organisation and the governance of universities.

One can find in the literature different ways of approaching the concept of integration. For this reason, there is not a unique and universal definition of quality management integration, both outside and inside higher education. The terms 'integration', 'integrative' or 'integrated' are often absent from the literature and terms such as 'holistic', 'systemic' and 'total' tend to emerge instead. And if it is true that they do not all necessarily mean the same, it is also true that they all seem to represent a common trend: the development and the implementation of comprehensive approaches to quality management in organisations, and in universities, in particular.

Having in mind the different 'levels' and 'dimensions' underlying the concept of quality management integration in higher education found in the literature, which includes but is not limited to the alignment of quality management with the strategy of the organisation, we define quality management integration in higher education as an approach to quality management which covers the different processes of universities (teaching and learning, research and scholarship, third mission, support processes), their different organisational levels (programme, unit and institutional level), the principles underlining the definition of quality management, at the same time that integrates quality management in the broader management and governance system of universities. This means that: quality management is part of the global strategy of universities, quality management is the responsibility of the management and governance bodies of universities, and those bodies use the results from quality management practice in their decision-making process.

1.4. Universities' internal stakeholders perceptions of quality management

Academics tend to show "different degrees of acceptance, support and adaptation to the quality assurance idea, policies and implementation procedures" (Cardoso, Rosa, & Santos, 2013; Newton, 2002; Westerheijden et al., 2007).

Newton (2002, p. 46) identifies different views from academics regarding quality in higher education, which also correspond to the limitations academics tend to point out in the quality management systems: i) quality as "ritualism and tokenism", meaning quality as compliance

with requirements as priority and enhancement as secondary; ii) quality as "impression management", meaning the "stage-managed" preparations for external assessment; iii) quality as a "burden", particularly "administrative and cost burden", in the words of Laughton (2003, p. 309), and "part of an inspectorial compliance culture"; iv) quality as "failure to close the loop", meaning the exclusion of key areas; v) quality as "suspicion of management motives" or, as argued by Harvey (2006, p. 290) "manifestation of managerialist control", monitoring and controlling the academic work and weakening the academic autonomy; vi) quality as "lack of mutual trust", emphasising the accountability of front-line academics; vii) quality as "a culture of getting by" where front-line academics, constrained by lack of time, deal with confusing demands. The lack of time to deal with the quality requirements and the bureaucracy associated with the quality management procedures are indeed a weakness stressed by academics and one recurring factor for their resistance to quality management (Harvey, 2006; Laughton, 2003; Newton, 2002).

Moreover, academics complain about their little involvement in the development of the quality management procedures (Cardoso et al., 2013; Loukkola & Zhang, 2010), and also about the quality procedures themselves, claiming that they are reductionist, incapable of grasping the essence of the educational process and not entirely reliable (Cardoso et al., 2013; Laughton, 2003).

It is also interesting to observe that academics tend to differentiate the improvements in the quality management systems from the improvements in quality (Newton, 2002). Harvey (2006) claims that academics, when questioned about the main impacts of external quality management in higher education, underline the improvements in the quality procedures, namely "performance indicators", "review process", "internal quality units and formal processes" rather than improvements in the quality of the university and its mission, namely teaching and learning and research and scholarship.

This concern of academics that the "quality initiatives emphasise processes rather than outcomes" seems to be related to a gap between rhetoric and reality regarding quality management. Hence, there seems to be a "gap between what staff would like the initiatives to achieve and what they think they have achieved" which lead us to conclude that academics "perceive the initiatives as being more about assurance than enhancement" (Lomas, 2007, p. 410).

Furthermore, academics perceive quality as a philosophy that is in "contradiction to the core values of academic culture, and ultimately as a subversion of academic identity" (Laughton,

2003, p. 318). Bell and Taylor argue that (2005, p. 239) “academics as a community do not identify with quality as a worthwhile project through which identity can be formed.”

Still, there are also academics that seem to show a growing acceptance and support of quality management, with a positive perception of its introduction, namely in the case of Portugal (Cardoso et al., 2013; Rosa & Sarrico, 2012). Kleijnen et al. (2011) state that academics believe in the benefits of quality management and particularly that quality management results in improvement and not only results in control.

The support of quality management activities by academics also seems to depend to a great extent on the level of ‘control’ they involve and on the level of ‘academic autonomy’ they enable. Academics accept quality assurance as long as academics’ autonomy is not at risk and controlling mechanisms are avoided (Huusko & Ursin, 2010).

Some academics neither resist nor support quality management, but rather adapt to it, meaning they “reluctantly [collaborate] in order to prevent more unpleasant or problematic professional outcomes” (Cartwright, 2007, p. 298). In this sense, academics are “resilient compliers” who “combine passive resignation (...) with mostly silent resistance. They deliver the information needed and apply the rules, but try to avoid becoming known as vassals of the system” (Sousa, Nijs, & Hendriks, 2010, p. 1454).

One final issue regarding academics perceptions of quality management is that those performing management functions and, mainly those involved in quality management activities tend to have a more optimistic view of such activities. This is true, not only for academics but also for non-academics and, as it will be noted below, for students. On the one hand, those with low involvement in quality management activities tend to have less knowledge and a more pessimistic perception of quality management. On the other hand, those more directly involved in the quality management system seem to have a deeper knowledge of the quality management system of the universities and also a more optimistic view of such activities (Bell & Taylor, 2005; Newton, 2002; Rosa, Tavares, & Amaral, 2006; Stensaker, Langfeldt, Harvey, Huisman, & Westerheijden, 2011).

The relationship between the involvement in quality management activities and the opinion about it can also be visible when we analyse the perceptions of non-academic staff. Non-academics highly involved in the development of the quality management systems have, not only a deep knowledge about them but also a very positive opinion (Manatos, Rosa, & Sarrico, 2016). The role of non-academic staff in quality management is, however, insufficiently researched.

Students also play a crucial role in the quality management systems of universities. Hence, their participation improvement has been a crucial element in the development of quality management in Europe especially since the years 2000s. However, one cannot find extensive literature on the topic.

Assuming that the students are one of the main stakeholders of higher education, it is clear that they can give crucial information in assessing its quality (Cardoso, Santiago, & Sarrico, 2012a; Harvey, 2003; Leckey & Neill, 2001; Stensaker et al., 2011; Trowler, 2005). Therefore, "students' representations should be taken into account" in order to "to align quality assessment systems with the expectations of one of the institutional groups most interested in the improvement of higher education quality" (Cardoso, Santiago, & Sarrico, 2012b, p. 293).

However, and despite the increasingly important role attributed to students, , they "have no universally accepted part in the evaluation of the education which they receive" (Kogan, 1993, p. 22).

According to Mourad (2013), there are a lot of challenges regarding the active participation of students in quality management. On the one hand, the exclusion of students from an active intervention on the quality management systems of their universities seems to lead to a low level of awareness from students. According to Cardoso and colleagues (Cardoso et al., 2012a, p. 125), "this lack of awareness brings in to question the effectiveness of assessment as a device for promoting institutional accountability."

On the other hand, students often perceive quality management activities as "useless", "wasting of time", "not clear" and "not transparent" (Mourad, 2013, p. 359). Students are indeed sceptical regarding the capacity of quality management systems to generate positive results (Kogan, 1993; Stensaker et al., 2011). This sceptical position seems to be related to the lack of information about the results of the quality management systems and the changes derived from them. Although it can be argued that students do not develop effective strategies to access the information provided by universities concerning the results of the quality management systems, the literature shows that universities do not adopt a clear and transparent position regarding the dissemination of concrete data on quality management (Cardoso et al., 2012a; Harvey, 2003; Leckey & Neill, 2001).

The scepticism and the low interest students frequently show regarding quality management seem also to be linked to a low interest on institutional matters in general (Bateson & Taylor, 2004; Tavernier, 2004).

Students, however, perceive some benefits from quality management systems: image, reputation and credibility of the university, on the one hand; and continuous improvement and enhancement of the educational quality through the students' evaluation of the faculty and the courses (Mourad, 2013).

Furthermore, students who are involved in quality management activities believe that "their awareness about (…) the internal quality assurance system enhance their learning experience (…), self-development (…) and self-satisfaction due to participating in the decision making process within the university" (Mourad, 2013, p. 359).

In this context, "the challenge universities now seem to face is to be creative and to engage in new and diverse strategies aimed at informing students of the assessment process and its consequences" (Cardoso et al., 2012a, pp. 133, 134).

In this context, stimulating the participation and the engagement of students in the quality management systems and improving the information and communication about their development and implementation are perhaps some of the greatest challenges for the future of quality management in higher education, at the risk of "questioning the legitimacy of the whole process" (Stensaker et al., 2011, p. 479).

As Stensaker and colleagues (2011, p. 476) argue: "there is a real danger that quality assurance schemes can be accused of not being very efficient and of targeting processes stimulating bureaucracy, organisation and regulation more than addressing issues that are central in the minds of the academic staff and students."

Consequently, "universities must invest in staff development as well as students training" and "educate students and faculty members about their roles in the quality assurance process." Particularly, universities must treat students "as partners" and increase "their participation in the decision making process" so that they understand "they are having an impact on the university" (Mourad, 2013, p. 361).

Furthermore, Watty (2006) highlights the importance of listening to the various stakeholders in universities, arguing that if policy-makers do not take into consideration the opinions of the different stakeholders regarding quality management policies for higher education, there is a risk for universities that quality management systems become a mere compliance and form-filling exercise.

1.5. Thesis structure

The thesis is organised in four main chapters. The first chapter presents an introduction to the theme under study and is divided in three subchapters introducing the main theoretical topics of our research: i) the particularities and challenges of the higher education sector regarding quality management; ii) the development of quality management systems in European and, specifically, in Portuguese higher education; iii) the idea of quality management integration in higher education.

The second chapter outlines the thesis main goal, the specific goals that operationalise it, the research questions and the methodology of the study and is divided in four parts, corresponding to the four main research questions and methodological approaches of the thesis.

The third chapter presents the fours papers developed in the thesis:

a. Manatos, M., Sarrico, C.S., & Rosa, M. (2017). The integration of quality management in higher education institutions: a systematic literature review. *Total Quality Management & Business Excellence, 13*(1-2), 159-175. DOI:10.1080/14783363.2015.1050180
b. Manatos, M., Sarrico, C.S., & Rosa, M. (2017). The European Standards and Guidelines for Internal Quality Assurance: an integrative approach to quality management in higher education?. *TQM Journal, 29* (2), 342-356. DOI:10.1108/TQM-01-2016-0009
c. Manatos, M., Sarrico, C.S., & Rosa, M. (2015). The importance and degree of implementation of the European Standards and Guidelines for internal quality assurance in universities: the views of Portuguese academics. *Tertiary Education and Management, 21* (3), 245-261. DOI:10.1080/13583883.2015.1061587
d. Manatos, M., Sarrico, C. S., & Rosa, M. (2017). Quality management in universities: towards an integrated approach? (forthcoming). *International Journal of Quality and Reliability Management*.

Finally, the forth chapter is the conclusive chapter, which highlights the main conclusions of the research, the new dimensions which emerge from the research, and the main limitations and implications of the research.

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Chapter 2. Research questions and methodological approaches

The literature review on quality in higher education has brought to the fore the idea that more and more universities need to implement internal quality management systems, both due to external demands and internal motivations. Nevertheless, the exact characteristics of these systems, the way they are implemented, the processes and organisational levels they cover and/or the degree in which they are actually part of the institutions' overall management and governance systems are still to be seen.

On a general basis we are able to find in the literature evidence claiming that quality management should be part of the overall organisational management framework. Is this the case also for quality management in higher education, namely in universities?

With this research we aim to shed some light on this topic, namely through the investigation of whether there is a theoretical and empirical trend towards the integration of quality management in higher education. We understand integration as the process whereby organisations develop quality management mechanisms which are part of their wider management and governance systems, covering different processes and organisational levels while including the implementation of a whole set of principles that underlies the definition of quality management.

This concept embraces three main levels, which represent the levels where we look for quality management integration in higher education:

i. The **main processes** of universities are four: the three main processes of universities (teaching and learning, research and scholarship and the third mission), but also support processes (Barnett, 1990). Teaching and learning, together with research and scholarship, are the core activities of universities. The third mission reflects the engagement of universities in business-related activities, local and regional development, economic growth and societal development in general (Laredo, 2007). The support processes cover all sorts of ancillary services and processes, ranging from administrative services to other support processes and activities (Yeo & Li, 2014).

ii. The **organisational levels** of universities are three: programme level, unit level (department, faculty or other basic unit of the university) and institutional level (Brennan & Shah, 2000).

iii. The **principles of quality management**: customer focus, leadership, involvement of people, process approach, system approach, continuous improvement, factual approach to decision-making, and mutually beneficial supplier relationships (ISO, 2012).

In the context of higher education, customer focus means the concern of universities with customer identification, their needs and expectations. Leadership is related with the role of management bodies of universities, with respect to the definition of the mission, the values and the goals of the universities, the promotion of a quality culture and the promotion of the involvement of people in quality management. The involvement of people is translated into the efforts to involve the people working in universities (academic and non-academic staff and students) in the quality management mechanisms. Process approach has to do with the management of the different missions of universities (teaching and learning, research and scholarship and third mission), as well as of their support processes as processes, i.e., as a set of inter-related activities which turn inputs into outputs. System approach is related with the management of the different processes, units and services of universities in an integrated way. Continuous improvement translates the efforts of universities to continually improve their quality. Factual approach to decision making, as the name suggests, means that decisions in universities are based on the analysis of data and information provided by different sources. Mutually beneficial supplier relationships are translated into the development of relationships with suppliers, or, at a broader sense, and as we understand it for the purposes of this study, with their external stakeholders, such as parents, secondary schools, future employers, local community and the society as a whole, similarly to what is being proposed in the new version of the ISO 9000 family of standards (ISO, 2015) [1].

The concept of integration assumes also that quality management is part of the broader management and governance system of universities. This means that: quality management is part of the global strategy of universities; the management and governance bodies of universities have quality management as one of their areas of responsibility; and the results

[1] It should be noted that we did not use as reference the most recent version of the quality management principles (ISO, 2015), because when we started our research they had not yet been released. However, when comparing the old and the new version of the principles, the main differences are in the principles of process, system approach and mutually beneficial supplier relationships. In the 'new' version, the principle of system approach as a separate principle disappears, but in contrast, the new principle of process approach states that the activities of the organisations should be "understood and managed as interrelated processes that function as a coherent system" (ISO, 2015, p. 10). In this sense, the idea of a system approach, i.e. the management of an institution as a coherent and interrelated whole, remains in the new quality management principles, but it is integrated in the principle of process approach. Moreover, the principle of "relationship management" replaces the principles of "mutually supplier relationships", highlighting the "particular importance" of the relationships of an organisation with, not only the suppliers, but all the "interested parties" and of the "relationship management with its supplier and partner networks" (ISO, 2015, p. 16), which is already our understanding of the principle of mutually supplier relationships in the present research.

from quality management practices are used as information for the universities' strategic management.

Our main research question is: **to what extent is there theoretical and empirical evidence of a trend towards quality management integration in universities?**

Therefore, first, we aim to theoretically analyse whether:

i. the literature on higher education is presenting developments towards integrative and holistic approaches to quality management;
ii. the reference model for the development of quality management systems in European universities (European Standards and Guidelines – Part 1) is an integrative quality management framework.

Second, we intend to empirically explore:

i. the importance and the level of implementation of the European Standards and Guidelines in universities;
ii. the trend towards the integration of quality management in universities.

In order to fulfil the above mentioned goals, our study is developed in four main stages, corresponding to four main research goals, which we answer using different methodological approaches, developed in four research papers.

We triangulate multiple sources of data: quantitative and qualitative; using different methodological strategies: survey and case study; different data collection techniques: systematic literature review, questionnaire and semi-structured interview; and different data analysis techniques: content analysis and descriptive and inferential statistics (paired sample t-test, t-tests for independent samples, one-way analysis of variance and regression estimates).

Generally, while quantitative research aims to "determining cause and effect, predicting or describing the distribution of some attribute among a population", qualitative research aims to "uncovering the meaning of a phenomenon" (Merriam, 2009, p. 5). Moreover, in quantitative research, the focus is on prediction, description and confirmation; inanimate instruments (scales, tests, surveys) are the instruments of data collection; the process is deductive; and the product is precise. In qualitative research, the focus in on process, understanding, and meaning; the researcher is the primary instrument of data collection and analysis; the process is inductive; and the product is richly descriptive and comprehensive (Bryman, 1992; Merriam, 2009).

We develop a 'mixed method approach' or 'method triangulation between methods' since we used both quantitative and qualitative data collection techniques and analysis procedures in our research design (Brannen, 1992; Saunders, Lewis, & Thornhill, 2009).

There is one major advantage in choosing to use multiple methods in the same research. This advantage is associated with the inevitable relationship between the data collection techniques and procedures and the results. "Since all different techniques and procedures will have different effects, it makes sense to use different methods to cancel out the 'method effect'" and to have "greater confidence" in the results (Saunders et al., 2009, p. 154). However, one must have in mind that the triangulation of different methods is not unproblematic and uncontentious (Bryman, 1992, p. 66). As Brannen (1992, p. 13) points out "the assumption that combining approaches ensures the validity of data is naïve. (…) Data can only be understood in relation to the purposes for which they are created." The data generated by different methods cannot simply be aggregated to produce a single unitary picture of what is assumed to be the truth (Brannen, 1992; Bryman, 1992).

In the case of our research, we triangulate quantitative and qualitative methods since we have also different research questions and purposes, each of them answered by different methodological approaches.

2.1. Is there a trend towards the integration of quality management in higher education? A systematic literature review

In the first stage of our research we aim to understand whether there is a trend in the literature towards the integration of quality management in higher education. The awareness for the phenomena of integration of quality management in higher education led us to the development of a systematic literature review, in order to understand how the literature has been approaching quality management in higher education and whether the literature has been evolving towards integration.

The first paper presents the concept of integration, which we assumed from the beginning of our work, and which will be a cross-cutting concept in our research and in the subsequent papers. In this paper we aim to understand: whether the reviewed literature approaches the quality of processes separately or in an integrated way; whether quality practices exist at the three organisational levels and whether they are managed in an articulated way; and finally, whether the different dimensions associated with quality management principles are implemented separately, or whether they are approached holistically. We also want to check

whether the papers reveal a temporal trend towards integration, in order to comprehend whether the most recent articles present a more integrated approach to quality management in higher education.

According to Webster and Watson (2002, p. xiii), an effective literature review "creates a firm foundation for advancing knowledge. It facilitates theory development, closes areas where a plethora of research exists, and uncovers areas where research is needed". The authors also argue that it is not merely an exercise of synthesis of existing research, but it also needs to identify "critical knowledge gaps" and "guide future research" (Webster & Watson, 2002, pp. xix, xxi).

A literature review is "the selection of available documents (…) on the topic, which contain information, ideas, data and evidence written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed"(Hart, 1998, p. 13).

Page (2008, p. 172) states unlike a traditional narrative review, which is more dependent from the reviewer's judgement, a systematic literature review involves "a set of assessment and statistical tools".

Over and above that, "systematic means comprehensive accumulation, transparent analysis, and reflective interpretation of all empirical studies pertinent to a specific question. Reliance upon any sampling or subset of the literature risks misrepresenting its diversity in findings, outcomes methods, and frames of reference" (Rousseau, Manning, & Denyer, 2008, p. 479).

A systematic literature review involves a systematic approach to: the search, the "quality control" (Rousseau et al., 2008), the synthesis, the analysis and the presentation of the literature. It needs a "priori specification of planned review methods/protocol", "a clearly focused question", "clear explicit criteria for inclusion and exclusion", "documentation of (the) search process", "an explicit mechanism to handle quality assessment", the "exploration of assumptions, limitations and areas of uncertainty" (Booth, Sutton, & Papaioannou, 2012, p. 31).

Therefore, the main features and simultaneously strengths of a systematic literature review are clarity, validity, auditability, transparency and exhaustivity (Booth et al., 2012).

Booth and colleagues (2012) argue that all literature reviews should be systematic and only differ in the degree to which they are systematic and how explicit their methods are reported.

Hammersley (2001, p. 550) goes further and questions "After all, what use would *unsystematic* reviews be? Who would be in favour of them", if to develop a systematic literature review is the proper and valid way to produce a literature review?

However, developing a literature review can be a challenging, time and resource intensive process (Page, 2008; Papaioannou, Sutton, Carroll, Booth, & Wong, 2010).

Having in mind the challenges and the complexity of developing a systematic literature review, our main goal is to explore the existing literature, following accurate procedures, in order to assure, not only the greatest possible coverage of relevant articles corresponding to our research goals and analysis criteria; but also, and perhaps more importantly, the clarity, validity and auditability of the review, its analysis and findings.

2.2. Are the European Standards and Guidelines an integrative quality management model? A content analysis

After analysing how the literature has been approaching quality management in higher education and whether there is a trend towards the integration of quality management, in the second stage of our research we analyse one European reference quality management model for universities developing internal quality management systems: the Standards and Guidelines for Quality Assurance in the European Higher Education Area, commonly known as ESG. The purpose is to understand whether they are a truly integrative quality management model.

For this purpose, we develop a content analysis of the European Standards and Guidelines, taking into account the levels and dimensions underlying the concept of integration (ENQA, 2009)[2]. We aim to understand whether the European Standards and Guidelines approach the four main processes of higher education; their main organisational levels; the principles underlying the definition of quality management; and also whether they approach quality management as part of the broader management and governance of the universities.

We develop a content analysis using the NVivo software and taking into account our framework of analysis, which is simultaneously our "coding system" (Babbie, 2015).

"Content analysis is a technique for analysing a body of text" and is "based upon an explicit sequence of steps with which to systematically organize elements of text so as to enable an investigator to meaningfully interpret and make inferences about the patterns in the content

[2] It should be noted that we did not use as reference the revised version of the European Standards and Guidelines (ENQA, 2015), because when we started our research they had not yet been released.

of the overall body" (Bowen & Bowen, 2008, p. 689). Similarly, Drisko and Maschi (2016, p. 7) define content analysis as "a family of research techniques for making systematic, credible, or valid and replicable inferences from texts and other forms of communication."

Content analysis can have quantitative, interpretative and qualitative approaches. The quantitative, also known as "basic" content analysis uses quantitative analytical techniques, namely the frequency of word or passage use, that only or predominantly address literal communication content. The main goals of this approach are description and data organisation. The inductive content analysis considers both manifest and latent content as well as contextual communication content and tends to focus on summarizing and describing meanings in an interpretative manner, rather than on word counts or other quantitative methods (Drisko & Maschi, 2016). Qualitative content analysis is based on the interpretation of texts and "seeks to develop carefully specified categories that are revised and refined in an interactive, feedback-loop process to ensure credibility and usefulness" (Drisko & Maschi, 2016, p. 6). Many content analyses can however use both quantitative and qualitative research techniques. Despite the differences in the different approaches, all content analysis must be "systematic, methodologically based and transparently reported" in order to make clear how the data was collected, coded and analysed (Drisko & Maschi, 2016, p. 6).

Here, the content analysis of the European Standards and Guidelines combines a quantitative approach with a more interpretative and qualitative approach, since the analysis of the European Standards and Guidelines considering the *a priori* defined levels and dimensions of analysis requires not only the simple analysis of the manifest content, but it also requires a deeper interpretation of that content.

"Rigorous content analysis must be based on a systematic approach that is clearly described to the reader and that allows replication by other researchers" (Drisko & Maschi, 2016, p. 7). In this sense, and in order to assure the credibility of our analysis, validation is carried out by "investigator triangulation" (Bryman, 2004). The three investigators participating in this study were involved in the analysis process, specifically in codifying the European Standards and Guidelines according to the different levels and dimensions of analysis. The codification of the investigators is then compared and discussed until a consensual result was reached.

We analyse to what extent the three levels and their dimensions are reflected in the seven European Standards and Guidelines with reference to the following scale: highly reflected, substantially reflected, partially reflected and insufficiently reflected. In the end, we make an

overall analysis of how well the different levels and dimensions were represented in the European Standards and Guidelines.

One question inquired as to the respondent's knowledge of the ESG as a whole, while one or more questions (depending on the standard) focused on the academics' perceptions of each standard's importance for universities. A further set of questions for each standard then queried academics about its degree of implementation in their university.

Academics gave answers on a scale of 1 to 7, where 7 represents the maximum level of knowledge, importance or degree of implementation, and 1 represents the minimum.

We opted to use a census as the data collection strategy: the questionnaire was sent to all Portuguese universities, requesting that institutions disseminate it among their academic staff. A total of 1,116 complete responses was gathered from universities (from a total population of 17,991).

We weighted our cases, according to four variables, which characterise the entire population: gender, research area, sub-sector and academic degree, to make it more representative of the population. The weighted sample selected 1,084 cases.

2.3. How do academics perceive the European Standards and Guidelines' importance and implementation? A survey in Portuguese universities

After analysing the European Standards and Guidelines and understanding whether they represent an integrative quality management model, the third stage of our research aims to understand how the European Standards and Guidelines are perceived by academics, regarding their importance and their implementation in universities.

We aim to answer the following questions:

1. What is the level of awareness and knowledge of the European Standards and Guidelines by academics?
2. What importance do academics perceive that the European Standards and Guidelines hold for the development of quality management practices in their universities?
3. What do academics perceive to be the degree of implementation of the European Standards and Guidelines in their universities?

4. Is there a significant difference (a gap) between academics' perceptions of the importance of the European Standards and Guidelines and their degree of implementation in their universities?
5. Are there different perceptions among different groups of academics, taking into account their research area, gender, sub-sector, academic degree, performance of management functions and level of involvement in quality management activities?

In order to answer those questions, we carry out a survey. This systematic method for gathering information from (a sample of) entities for the purposes of constructing quantitative descriptors of the attributes of the larger population of which the entities are members" (Groves et al., 2009, p. 2). According to Majumbar (2008, p. 241), the survey methodology "helps to probe individuals' opinions, attitudes, behavior, and preferences in a social setting."

According to Guthrie (2010), censuses are the most complete type of survey and their main advantages are completeness and accuracy. There is however potential shortfalls associated with censuses and surveys in general. First, there is the risk of the inaccurate representation of the population and the inconsistencies between the population and the sample, which can be overcome namely by testing the sample variables against the equivalent population parameters, as we do in our research (Guthrie, 2010). Second, "surveys often limit their measures to those that can be standardized and repeated over large numbers of persons. Surveys are conducted in the uncontrolled settings of the real world and can be affected by those settings" (Groves et al., 2009, p. 33). Finally, making the decisions that have a better chance of minimizing the limitations and errors in the survey often involves effort, time and money.

Bearing in mind those strengths and weaknesses, we choose the census to collect our data, by targeting the questionnaire to all academics in Portugal.

We build a questionnaire taking into account the seven standards and the corresponding guidelines for internal quality assurance. Then the data collected is analysed using descriptive and inferential statistics: paired sample t-test, t-tests for independent samples, one-way analysis of variance (ANOVA) and regression estimates.

The statistics are the above called "quantitative descriptors" (Groves et al., 2009). The descriptive statistics describe the size and distributions of various attributes in a population and the inferential statistics are used to measure how two or more variables are related and enables to make inferences about the population from the sample data (Groves et al., 2009).

2.4. Are universities developing integrative quality management systems? A country case study

In the last stage of our research we look for empirical evidence for the integration of quality management in higher education. Here we aim to understand whether universities are developing their quality management systems, integrating the different processes, organisational levels, quality management principles, and whether they are being integrated in the broader management and governance context of the universities.

We adopt a case study approach. Its goals is to obtain a close-up and "in-depth understanding" of a single or small number of cases, set in their real world contexts (Yin, 2012, p. 4). A case study can thus be defined as an "in-depth", "multifaceted investigation", using only qualitative research methods or combining qualitative and quantitative research methods, of a social phenomenon. "The study is conducted in greater detail and often relies on the use of several data sources" (Orum, Feagin, & Gideon, 1991, p. 2).

The main strengths of this technique concern the possibility to investigate complex social units and to produce a rich and comprehensive analysis of a phenomenon. However, some of its main strengths also present limitations. The rich and deep understanding of a phenomenon may normally require too much time and/or money. Moreover, "qualitative case studies are limited by the sensitivity and integrity of the investigator (…) and the issues of reliability, validity, and generalizability." In other words, qualitative case studies may have the problem of lack of rigor and the problem of bias, linked to the subjectivity of the researcher (Merriam, 2009, p. 52).

Here, we develop three qualitative case studies in Portugal, using qualitative data collection techniques. We decide to study the first universities with quality management systems certified by A3ES (the Portuguese Agency for Assessment and Accreditation of Higher Education). It is relevant to analyse universities whose internal quality management systems have reached an advanced stage of implementation, in order to understand whether these quality management systems are being developed in an integrative way. These cases can be defined as paradigmatic (Flyvbjerg, 2006) or extreme cases (Gerring, 2007), which "corresponds to a case that is considered to be prototypical or paradigmatic of some phenomena of interest (…) ideal types" (Gerring, 2007).

Our sample includes one engineering and technology school and two universities, all different in terms of size and location (Universities A, B and C). To further diversify the study, we have sought to choose different scientific areas in the three universities. The choice was based on

Becher and Trowler (2001) typology between “hard” versus “soft” and “applied” versus “pure” disciplines, as the different nature of the disciplines can be a variable to be considered in explaining some differences within universities. Likewise, Clark (1983) stated that, “the discipline rather than the institution tends to become the dominant force in the working lives of academics”. Nevertheless, the authors acknowledge that sometimes the boundaries between the scientific areas are not evident and easy to define (Becher & Trowler, 2001).

However, our initial goal of having a hard/applied programme and a soft/pure programme in each university was not possible: first, due to the fact that University A is an engineering school, where we cannot find other scientific areas; and second, due the non-cooperation of the programme of Language and Literature in University C, we were forced to choose another programme of the School of Social Sciences in this university: Basic Education. We ended with one ‘hard’ area in each university – Informatics Engineering – and two ‘soft’ areas in two universities – Language and Literature and Basic Education.

Our research has two main stages. First, and in order to understand the quality management policies of the universities, we analyse the content of strategic documents, documents more directed linked to the internal quality management policy, and external reports from external review entities. We believe the joint analysis of strategic and quality related documents, as well as external quality reports can give us a good overview of how the universities are developing their quality management policies.

Unlike the content analysis of the European Standards and Guidelines, which involves a deeper interpretation of their content, the content analysis of universities’ internal and external documents is developed using a more direct approach based on the analysis of the manifest content, with a more descriptive purpose, having in mind the levels and dimensions of analysis of our research design. We assume that the meaningful content is fully contained in the texts under study (Drisko & Maschi, 2016).

In order to understand the quality management practices and how they are being implemented in the universities, we carry out semi-structured interviews with different internal stakeholders.

According to Newton (2010), semi-structured interviews are placed along the “continuum” between the “unstructured” interviews, which are closer to observation, and the “structured”. Generally, the highly structured interviews are closer to a questionnaire, with predetermined wording and order of closed questions; and the unstructured or informal interviews are normally exploratory interviews, closer to a conversation, with flexible open-ended questions,

and they are usually applied when the researcher does not know enough about a phenomenon to ask relevant questions (Merriam, 2009).

We interview academics with different hierarchical positions in the organisational structure and with different involvement levels in the quality management systems, from top managers responsible for the development of the quality management policies, to academics without management functions, which are responsible for the implementation of the quality management policies. We also interview non-academics and students. Both academics without management functions and students are interviewed in panels of 3, 4 or 5 elements[3], in order to "use the interaction between a group as a source of further insight" (Blaxter, Hughes, & Tight, 2006, p. 172). As emphasised by Chrzanowska (2002, p. 20) "group setting always brings dynamics into play, arising from the processes of forming into a group and from the interactions of the respondents themselves." In total, we make 23 individual interviews and 9 panel interviews.

We draw an interview script, with several open questions around five main topics. Each one encompasses different dimensions: i) quality in higher education, including the strategies, goals and drivers of quality management; and the aforementioned levels where we look for integration, ii) processes, iii) organisational levels, iv) quality management principles; and finally v) quality management as part of the broader management and governance context of the university.

As is well known, semi-structured interviews are normally guided by a list of more flexible worded questions or issues to be explored (Merriam, 2009). They have a certain degree of predetermined order but still ensure flexibility in the manner and order the interviewer conduct the conversation (Corbetta, 2003).

The interviews are fully transcribed and the data collected is subject to content analysis and categorised into the different levels and dimensions of the grid, using the NVivo software for qualitative research. Contrarily to the content analysis of universities' internal and external documents, the content analysis of the interviews uses interpretative and qualitative approaches, combining quantitative and qualitative analytic techniques. The content analysis of the interviews goes beyond the study of the manifest content and requires the analysis of the latent content and the active interpretation of the interviewees' discourses (Drisko & Maschi, 2016).

[3] The only exception was the programme of Basic Education in UC, where it was not possible to bring together all the students and to articulate their different schedules, and the only possibility was to send the main questions to the Director of the programme, who distributed them by the students, who should have integrated the panel.

The triangulation of different sources of data, methodological strategies and data collection techniques allows us to address our specific research goals and questions and understand in a broader sense whether there is theoretical and empirical evidence of a trend towards quality management integration in universities.

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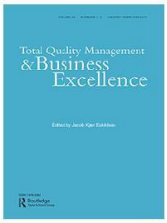
Chapter 3. Collection of papers

3.1. Manatos, M., Sarrico, C.S., & Rosa, M. (2017). The integration of quality management in higher education institutions: a systematic literature review. Total Quality Management & Business Excellence, 13(1-2), 159-175. DOI:10.1080/14783363.2015.1050180



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The integration of quality management in higher education institutions: a systematic literature review

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The integration of quality management in higher education institutions: a systematic literature review

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This paper presents the results of a systematic literature review showing how the literature on quality management (QM) in higher education (HE) has evolved. As a first contribution, this work presents a systematic breakdown of research in the field of HE quality management. Its second and most innovative contribution is its coverage of the process of introducing quality management into institutions' global management systems. Theoretically, we believe this second point to be a general trend in the evolution of the quality management literature, and empirically it represents a trend for quality management principles and practices in governance and management systems of higher education institutions (HEIs). The literature was analysed by distinguishing three main levels in HEIs: a process level, an organisational level, and, since our focus is specifically on the field of quality management, a quality management principles level. Overall, this paper concludes that integration at the three levels of analysis is strong. Moreover, we were able to identify a trend towards the development of holistic and comprehensive quality management approaches both in conceptual and empirical research studies.

Keywords: quality management; higher education; integration; literature review

Introduction

Quality emerged as a business and industrial concern, and gradually became a 'societal' concern affecting all areas of society, especially public services. This concern has driven a controversial debate about the best way to achieve quality in public services and also about the implications of applying quality management (QM) frameworks in public services that were designed for business and manufacturing.

There seems to be an aversion to the word 'management' in much of the literature dealing with higher education (HE). As a consequence, even when the literature on public services addresses QM, it tends to use a different terminology. HE in particular habitually refers to QM as 'quality assurance', which is rather odd for QM research, as it reduces the scope of QM to its assurance component. Indeed, literature on the study of HE has mainly been based on sociology or educational science, and less on management (Amaral & Magalhães, 2007).

Thus, this paper aims to fill a gap in the QM literature in the field of HE. We review the literature on QM in HE, looking at whether the literature has been evolving towards integration, as we believe that this is the current tendency in this field.

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Integration is seen as the process whereby organisations develop QM methods which are part of their global management systems, covering different processes and organisational levels while including the implementation of a whole set of principles that underlies the definition of QM. Our thesis statement is that the QM literature is evolving towards this idea of integration, and is increasingly presenting and discussing broad and holistic approaches to quality, in which these various dimensions appear, reflecting a systematic view of the organisation and its processes.

The need for integration has been discussed by a number of authors. According to Horine and Hailey (1995, p. 16), 'Quality management must be driven by clearly defined goals and strategic plans and must be planned and managed with the same (. . .) thoroughness as any other organisational strategy'. In the same way, Cruickshank (2003) believes that HEIs should closely weave quality assurance initiatives into the strategic plans of institutions.

Thus, this paper intends to provide a systematic review of the QM literature in HE. Its goal is to understand the following: how the literature approaches QM in the HE field; to what extent QM methods in HE are aligned with the broader definitions of QM and reflect its main principles; and finally, we want to check whether there is a temporal trend towards integration.

To our knowledge, this is an innovative study in the field of QM. The most similar study that we have found is the literature review of QM in HE conducted by Pratasavitskaya and Stensaker (2010). This, however, was more centred on the specific literature surrounding HE studies, and was more limited in terms of coverage and time frame.

Quality management in HE

QM has become embedded in more and more organisations since the beginning of the twenty-first century. This reflects the gradual realisation that lasting improvement could not be accomplished without paying significant attention to the quality of management practices used on a daily basis (i.e. that the 'quality of management' is as important as the 'management of quality') (Rosa & Amaral, 2007, p. 208).

Although it may be difficult, or even impossible, to find a unique and unequivocal definition of QM, it is generally accepted to represent a 'philosophy or an approach to management' made up of a 'set of mutually reinforcing principles, each of which is supported by a set of practices and techniques' (Dean & Bowen, 1994, p. 92).

Furthermore, these principles are part of a much-debated integrated paradigm for management – Total Quality Management (TQM) – which defines some general guiding principles and the core concepts of quality (Mehta, Verma, & Seth, 2014). Nevertheless, there is no model that can provide an ideal, one-size-fits-all solution for all organisational requirements (Berlin Communiqué, 2003).

The concern with quality in HE, covering teaching, research, services, and institutional-level approaches (Stensaker, Langfeldt, Huisman, & Westerheijden, 2011), gave rise to the debate about the applicability of QM tools to HE, where the most important challenge throughout is the 'critical rethinking' of quality and improvement (Bologna Declaration, 1999), and the design of quality models in a language that is familiar to the culture of HE and which could be adaptable to the mission of HEIs (European Association for Quality Assurance in Higher Education, 2009, pp. 16, 17).

The idea of integration

Theoretically, the management literature shows that a more integrative vision of QM practices is being proposed and implemented, as part of a broader system of management

practices. In fact, the literature seems to be changing its focus from that of an approach based on measurement models of quality in organisations, to a total and holistic management approach which promotes quality within organisations (Rosa & Amaral, 2007).

In particular, understanding the case of QM integration in HE institutions can be considered more interesting than most other industries, as HEIs bring to the fore the issue of integration in traditionally fragmented and loosely coupled organisations. This is opposed to for-profit organisations, which have a unique strategy and a strong leadership, even when compared to some public services which have a strong Weberian regime.

In fact, as Orton and Weick (1990) emphasise, universities have a fragmented internal and external environment, motivated by the existence of 'dispersed stimuli or incompatible expectations', and consequently, are loosely coupled systems and can be seen as 'organised anarchies' (Cohen, March, & Olsen, 1972; Weick, 1976; Orton & Weick, 1990; Deem, 1998).

However, there are indications that universities are increasingly interested in integrating their main activities and consequently their management practices. A good example is the development of instruments for classifying and ranking HEIs and also for adopting a broad range of dimensions and performance indicators (Van Vught & Westerheijden, 2010; Duque, 2013).

Moreover, the management context of universities seems to be more and more integrated, leading to the centralisation of power in a small number of decision-making and governance bodies (Melo, Sarrico, & Radnor, 2010).

Accordingly, one could argue that universities are, in practical terms, in the process of following the trend found in QM literature and in the daily life of organisations from other sectors – seeking stronger integration of various management practices within a global management and governance system.

In our literature review, there are three 'levels' where we look for integration: processes, organisation, and QM principles. Following the literature, these three different levels are the most significant in terms of understanding the different approaches to QM in HE, as well as for drawing conclusions about the degree of integration of QM within the overall governance and management systems of HEIs.

According to the literature on HE studies (Barnett, 1990), there are four main dimensions at the process level: teaching and learning, research and scholarship, third mission, and support processes. In turn, the literature on quality in HE (Brennan & Shah, 2000) refers to three organisational levels: programme level, unit level, and institutional level. Finally, the literature on QM (Evans & Lindsay, 2004) consensually presents eight principles of QM: customer focus, leadership, involvement of people, process approach, system approach, continual improvement, factual approach to decision-making, and mutually beneficial supplier relationships (ISO, 2012).

Research design

A systematic literature review is 'an important vehicle of academic discussion, dissemination and debate' (Page, 2008) and it must be 'thorough, sensitive and transparent' (Papaioannou, Sutton, Carroll, Booth, & Wong, 2010). However, several difficulties frequently arise in this process: not only can there be conflicting results, but also ambiguous, poorly defined and constantly changing terms appear (especially within social sciences) (Page, 2008; Papaioannou et al., 2010). Moreover, 'the larger the literature base on a topic, the more pronounced these problems can become' (Page, 2008) and 'seeking to minimise possible elements of bias is both time and resource intensive' (Papaioannou et al., 2010).

At present there are three main sources for bibliometric data: Thomson Reuters Web of Science (WoS), Elsevier's Scopus, and Google Scholar, but only the first two restrict their coverage to peer-reviewed-only material. Bearing in mind the potential bias and also the potential solutions, the research was carried out using Elsevier's Scopus database. Scopus is the largest abstract and citation database of peer-reviewed literature and it contains the most important journals in terms of our research topic (namely it indexes 50% more journals in the social sciences than WoS). Moreover, Scopus tends to cover less traditional topics, such as quality, as well as more interdisciplinary publications (Klavans & Boyack, 2007; Meho & Rogers, 2008).

Having defined the goals of the research, we searched for the expressions 'quality management', 'HE', 'universities', 'post-secondary education', 'TQM', and 'excellence' in articles from social sciences and humanities.

After the first search (based on the above mentioned criteria), data were exported to the reference management software Endnote before embarking on a first reading of the abstracts. Some articles were then excluded (see Figure 1) as they were outside the scope of our research. This procedure sought to find 'all relevant material in the database' and, at the same time, to 'reject irrelevant material' (Page, 2008). The remaining articles were then analysed and an in-depth analysis was carried out. (See Supplementary material online for a list of articles included in the literature review.)

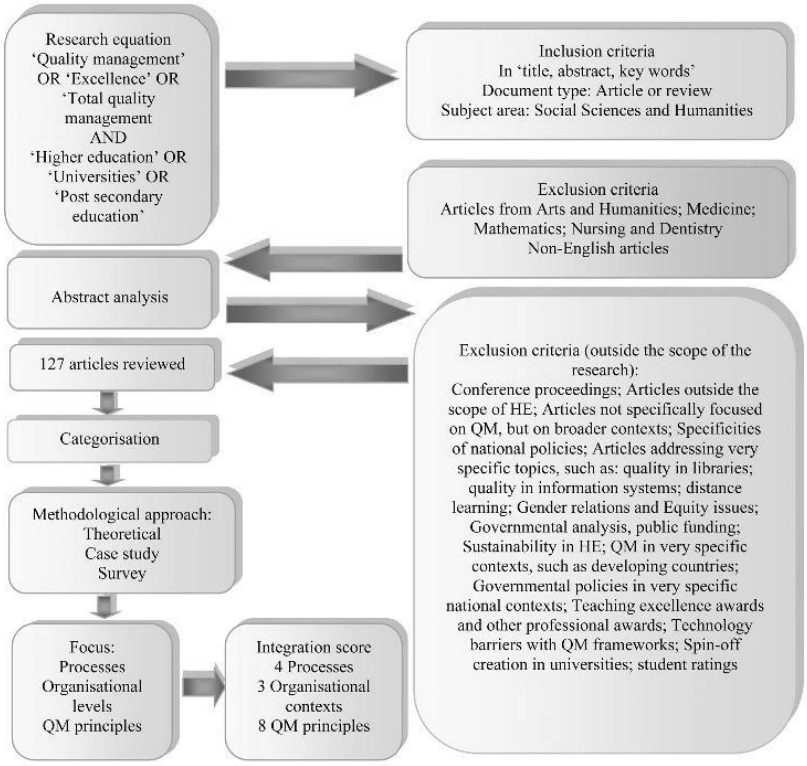

Figure 1. Research design.

Recognising the importance of assessing the quality of the papers included in the search (Papaioannou et al., 2010), we developed a bibliometric analysis using the impact factor of the journals and also the number of citations of the articles per year (see Table 1). We analysed the quality of the journals by taking into account the Scimago Journal Ranking (SJR), which

> is a bibliometric indicator that measures the prestige or influence of a scientific journal article, calculated with the largest and most nearly complete bibliographic database using a citation window of 3 years that is wide enough to include most of the citations and dynamic enough to measure the evolution of scientific journals; (González-Pereira, Guerrero-Bote, & Moya-Anegón, 2011, p. 19)

and the respective quartiles for the journal in 2013, where Q1 holds the highest values and Q4 the lowest values.

Table 1 shows that the majority of the articles found come from *Total Quality Management & Business Excellence* (TQM&BE), formerly known as *Total Quality Management* (1990–2002), which is a journal from the Business, Management and Accounting area. This is followed by *Quality Assurance in Education* and *Quality in Higher Education*, which respectively have 14 and 13 reviewed articles. Putting TQM&BE to one side, it is interesting to observe that two HE journals from the Social Sciences area have the highest number of articles addressing QM in HE. These three journals also have the highest number of citations. However, there are two other journals which stand out given their citations: *Quality Progress* and *International Journal of Quality and Reliability Management*. Despite having less than half the articles of the other three journals, these last two publications have a high number of citations. Table 1 also reveals that the journals in our literature review belong to a wide range of subject areas, ranging from Business, Management, and Accounting to Psychology.

A content analysis was conducted on the articles, based on an analysis grid that categorised them according to their methodological approach and their focus. The methodological approach divided the articles into one of three groups: conceptual or theoretical, single and multiple case study, and survey. With regard to the focus of the articles, we considered three sub-categories of analysis: processes, organisational level, and QM principles.

As processes, we considered not only the three main processes of HEIs (teaching and learning, research and scholarship, and the third mission), but also support processes. Teaching and learning, together with research and scholarship, are core activities within HEIs. The third mission reflects the engagement of universities in business-related activities, local and regional development, economic growth, and societal development in general (Laredo, 2007). The support processes cover all sorts of services and processes, ranging from administrative services to other support processes and activities (Yeo & Li, 2014).

The organisational levels were divided into programme level (if the article was focused on one or more study programmes offered by HEIs), unit level (if the focus of the article was a department, a faculty or other basic unit of HEIs), and institutional level (if the article had a broader focus in terms of the organisational structure of HEIs).

Finally, we categorised the articles according to QM principles. Since 'QM' is the key expression of our research, and as one of our goals was to understand the evolution of the QM literature in HE, we thought that it would be relevant to analyse whether literature on QM in HE addressed the QM principles.

Overall, we aimed to understand the following: whether authors approach the quality of processes separately or in an integrated way; whether quality practices exist at the three

Table 1. Scimago Journal Ranking and quartiles of the journals presented in the review.

Journals	Articles	SJR	Quartile[a]	Citations	Subject areas[b]
Total Quality Management & Business Excellence	24	0.574	Q1	419	1
Quality Assurance in Education	14	0.665	Q2	267	3
Quality in Higher Education	13	1.250	Q1	177	3
Assessment and Evaluation in Higher Education	5	1.340	Q1	27	3
International Journal of Quality and Reliability Management	5	0.653	Q1/Q2	109	1
Quality Progress	5	0.160	Q3/Q4	87	1, 6, 8
Innovative Higher Education	4	0.440	Q2	5	3
Journal of Higher Education Policy and Management	4	0.258	Q1	28	3
The TQM Journal	4	0.712	Q1/Q2	11	1, 6
Higher Education in Europe	3	0	–	22	3
Tertiary Education and Management	3	0.680	Q2	2	1, 3
Innovations in Education and Training International	2	0.850	Q1	4	3
International Journal of Educational Management	2	0.510	Q2	23	1, 3
International Journal of Productivity and Quality Management	2	0.332	Q2	10	1
Research in Higher Education	2	1.555	Q1	1	3
Academic Leadership	1	0.026	Q4	4	1, 3
Business Communication Quarterly	1	0.268	Q2	10	1, 5
Critical Perspectives on Accounting	1	0.924	Q1/Q2	58	1, 6
Current Science	1	0.275	Q1	5	4
Economics of Education Review	1	1.556	Q1	0	2, 3
Education and Training	1	0.390	Q2	5	1, 7
Educational Research and Review	1	0.150	Q4	0	3
Electronic Journal of Business Research Methods	1	0	–	0	1
European Journal of Education	1	0.500	Q2	0	3
Higher Education	1	1.310	Q1	11	5
Higher Education Quarterly	1	0.690	Q1	7	3
Human Factors and Ergonomics in Manufacturing	1	0.256	Q2/Q3	0	3, 8
International Business Management	1	0.388	Q2	6	1
International Journal of Business Performance Management	1	0.133	Q3/Q4	0	1
International Journal of Engineering Education	1	1.280	Q1	2	3, 8
International Journal of Physical Distribution and Logistics Management	1	1.310	Q1	3	1, 3
International Journal of Production Economics	1	2.393	Q1	2	1, 2, 6, 8
International Journal of Sustainability in Higher Education	1	1.081	Q1	8	3
JAC: A Journal of Composition Theory	1	0.116	Q3/Q4	1	3
Journal of Educational Administration	1	0.881	Q1	18	3
Journal of Hospitality, Leisure, Sport and Tourism Education	1	0.318	Q3	15	1, 3

(*Continued*)

Table 1. Continued.

Journals	Articles	SJR	Quartile[a]	Citations	Subject areas[b]
Journal of Management Development	1	1.305	Q1/Q2	5	1, 5
Journal of Personnel Evaluation in Education	1	0	–	0	7
Journal of Workplace Learning	1	0.547	Q2	1	1, 4, 9
Leadership and Organization Development Journal	1	0.521	Q1/Q2	10	1
Management Decision	1	1.420	Q1	7	1, 6
Minerva	1	1.034	Q1	0	3
Perspectives: Policy and Practice in Higher Education	1	0.290	Q3	2	3
Research and Administrative Activities	1	0	–	3	3
Research Evaluation	1	0.886	Q1	8	3
Russian Education and Society	1	0.111	Q4	1	3
Social Work Research	1	0.305	Q1/Q4	5	3
Sociological Perspectives	1	0.960	Q1	12	3
Systems Research and Behavioural Science	1	0.260	Q2/Q3	4	1, 3, 6
World Applied Sciences Journal	1	0.220	Q2	8	4

[a]The quartile in 2013 depends on the specific subject category in the journal.
[b]Subject areas:
1. Business, Management, and Accounting.
2. Economics, Econometrics, and Finance.
3. Social Sciences.
4. Multidisciplinary.
5. Arts and Humanities.
6. Decision Sciences.
7. Education.
8. Engineering.
9. Psychology.

organisational levels and whether they are managed in an articulated and integrated way; and finally, whether the different dimensions associated with QM principles are implemented separately, or whether they adopt a holistic and integrative perspective.

Moreover, despite references to the topic of integration appearing in the literature, as we have seen earlier, it has not been approached as a research topic in itself as it is here. As far as we are aware, this is the first study reviewing the level of integration of QM in HE. In this context, to facilitate the analysis of the level of integration found in each of the reviewed articles, we used an 'integration score', which is merely the result of the sum of the number of focused dimensions (4+3+8) resulting from the three levels of analysis in each article. As such, the highest possible integration score is 15.

Later in the article we also explore possible correlations between measures of quality of the journals and the articles, and the results of our literature review, mainly considering the integration score and the methodology, in order to understand if there were patterns or particular trends in these data.

Results and discussion

Methodological approach

Methodologically, there are more empirical than conceptual/theoretical articles on QM in HE (see Table 2). Nevertheless, analysing the evolution of theoretical and empirical articles over the years, we do not observe significant differences. The most significant

Table 2. Categorisation according to the methodological approach.

Approaches	Total
Conceptual/theoretical	57
Single case study	23
Multiple case study	7
Survey	35
Combination of survey and case study	5

trend seems to be the increase in both empirical and theoretical research, between 2005 and 2010 (see Figure 2).

Different approaches are visible in the theoretical articles: discussions on the applicability of the QM approach to HE (e.g. Cruickshank, 2003); analyses of existing quality frameworks for QM in HE, or the development and proposal of new ones (e.g. Ho & Wearn, 1996; Owlia & Aspinwall, 1996); theoretical discussions and literature reviews about QM in general, or about specific topics (e.g. Burkhalter, 1996); conceptual reflections on the concept of quality (e.g. Van Kemenade, Pupius, & Hardjono, 2008; Ehlers, 2009); or the analysis of national QM frameworks (e.g. Jensen, 2000; Juhl & Christensen, 2008).

For empirical studies, the survey is the most common methodological approach, followed by single and multiple case studies. There are also articles which combine both approaches. In general, empirical studies address topics such as the application of QM frameworks to HE (e.g. Rosa, Saraiva, & Diz, 2001, 2003); quality culture (e.g. Horine & Hailey, 1995; Hergüner & Reeves, 2000); and external quality control, accreditation and certification systems (e.g. Doherty, 1993; Papadimitriou & Westerheijden, 2010; Van Kemenade & Hardjono, 2010).

Process level

At the process level, the literature has a strong focus on the level of teaching and learning (see Table 3).

In fact, authors are especially concerned with what Brennan and Shah (2000) designate as the 'academic' and the 'pedagogic' facets of HE. Thus, several QM approaches in HE

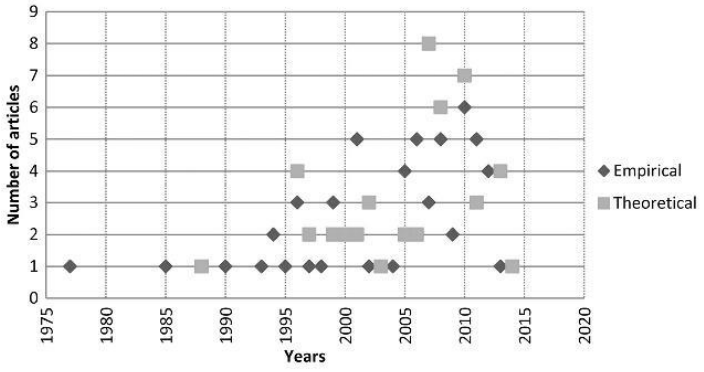

Figure 2. Temporal analysis of empirical and theoretical literature.

Table 3. Classification by focus.

Level	Focus	Total
Processes level	Teaching and learning	123
	Research and scholarship	49
	Third mission	31
	Support processes	59
Organisational level	Programme	45
	Basic unit	54
	Institution	107
Quality management principles level	Customer focus	95
	Leadership	76
	Involvement of people	90
	Process approach	87
	System approach	85
	Continual improvement	90
	Factual approach to decision-making	85
	Mutually beneficial supplier relationship	67

seem to be learning-oriented, with an emphasis on the students' learning experience and on educational development (e.g. Srikanthan & Dalrymple, 2002, 2005, 2007; Pratasavitskaya & Stensaker, 2010).

The research and scholarship dimension takes second place, with a lot less references than teaching and learning, despite being a core process in HEI. Widrick, Mergen, and Grant (2002) is a good example of the inclusion of research.

The third mission or 'the service to community' dimension (Srikanthan & Dalrymple, 2007; Rodman, Biloslavo, & Bratož, 2013) is the dimension receiving least attention.

The support processes dimension, after teaching and learning, is the most mentioned dimension at process level showing that QM in HE is applied at the level of administrative and management processes (e.g. Kanji & Tambi, 1999); support activities for students (e.g. Horine & Hailey, 1995; Burkhalter, 1996); support facilities and infrastructures (e.g. Srikanthan & Dalrymple, 2002, 2005, 2007); or student advice (e.g. Montano, Hunt, & Boudreaux, 2005).

Considering integration in the process level, we observe that there are not many articles integrating the four processes. Nevertheless, there are some articles with a good level of integration, and even articles proposing the integration of the different processes in HEIs. A particular example here is the research of Sellers-Rubio, Mas-Ruiz, and Casado-Díaz (2010), which proposes the complementarity of teaching, research, and administrative activities.

Organisational level

At the organisational level, we can see a clear emphasis on institutions, followed by basic units and then programmes (see Table 3). Thus, the literature focuses more on the larger and broader levels of the organisational structure of HEIs.

In terms of integration, the articles rarely address more than one dimension. More often, we find articles that address two levels – in this case an article normally studies a more focused level (programme or basic unit level), and the broadest level (institutions).

Quality management principles level

The literature frequently addresses the different principles of QM (see Table 3). Nevertheless, generally only one of the principles is emphasised (e.g. leadership, customer focus, process approach, or involvement of people).

The principle of customer focus is the most addressed. In HE, the concept of the customer can be complex, due to the 'difficulty of identifying customers and their expectations' and to the 'diversity of customers and stakeholders [which] is by no means a situation unique to HE' (Meirovich & Romar, 2006). In this sense, there is a continued debate regarding 'who the customer actually is' (Becket & Brookes, 2006). However, other authors do have a clear idea of the concept of the customer in HE and about who the customers are. In line with what was discussed previously, this idea of a customer can vary (e.g. Burkhalter, 1996; Evans, 1996). Students may be seen in different roles, sometimes as 'internal customers' or alternatively as 'laborers of the learning process' and as 'product-in-process' (Helms & Key, 1994; Sirvanci, 1996), or even as a 'product' for a 'customer', which is the 'employer' (Bailey & Bennett, 1996).

Since leadership has 'a strategic role in sustaining quality and performance improvement' in HEIs (Osseo-Asare, Longbottom, & Murphy, 2005), it is not surprising that it is also the focus of a significant number of articles. In some articles, leadership is not the main focus when seen in the context of QM frameworks (e.g. Cruickshank, 2003; Calvo-Mora, Leal, & Roldán, 2005, 2006; Houston, 2007); in others, leadership is highlighted and its importance in QM is discussed more deeply (e.g. Burkhalter, 1996; Davies, Hides, & Casey, 2001).

The principle of the involvement of people is also of central interest. In the literature reviewed, the involvement of people was taken to mean the involvement of the different stakeholders of HE in the quality process (e.g. Rosa et al., 2003; Calvo-Mora et al., 2005); and the perspectives of the stakeholders with respect to QM, whether employers (e.g. Willis & Taylor, 1999; Rodman et al., 2013), students (e.g. Zineldin, Akdag, & Vasicheva, 2011), or academics (e.g. Rosa, Tavares, & Amaral, 2006).

The process approach is also stressed in a significant number of articles, in order to highlight its integrative and interactive facet (e.g. Horine & Hailey, 1995; Burkhalter, 1996). As stated by Kettunen (2012), the process approach of QM means that 'an integrated system is representative of how an organisation is structured, and how each process is related to other processes (. . .) forming a total system' (Kettunen, 2012).

In this sense, the systemic approach present in a number of articles also stresses the integration, alignment, and inter-relationship among processes as a system (e.g. Barnard, 1999; Achcaoucaou et al., 2014).

Continuous improvement of organisational performance is also frequently discussed. Authors stress the importance of continuous improvement in the QM process overall and 'in achieving customer satisfaction and business excellence' (Kanji & Tambi, 1999).

The principle of a factual approach is addressed by a number of articles – this is to be expected, as a significant number of quality-related practices are based on the analysis of data, indicators, and other types of information (e.g. Achcaoucaou et al., 2014; Rodman et al., 2013).

The principle of mutually beneficial supplier relationships is also addressed and reflects the development and management of 'dynamic relationships with internal and external stakeholders' (Venkatraman, 2007).

Overall, we found several articles integrating all the principles of QM, especially those focusing on 'holistic' and 'total' management frameworks. There are very few articles that do not explicitly address any of the QM principles.

Quality management in HE: towards integration?

The most significant trend in the articles reviewed seems to be the development of QM frameworks and their specific dimensions either in conceptual or in empirical research (e.g. Srikanthan & Dalrymple, 2002, 2005, 2007; Rosa et al., 2003; Achcaoucaou et al., 2014). This trend seems to be the main reason for the high degree of integration when it comes to QM principles. Indeed, authors either theoretically discuss QM approaches (Torgersen & Torgersen, 1997; Anyamele, 2007; Bilen, 2010; Tambi, Ghazali, & Yahya, 2008; Law, 2010; Bagautdinova, Novenkova, & Sarkin, 2013), or accreditation models (Ayers, Gephart, & Clark, 1988); or develop empirical studies on the implementation of different QM models in HE, as with EFQM (Tarí, 2006), TQM and ISO 9000 quality standard (Doherty, 1993), or SERVQUAL (Pariseau & McDaniel, 1997).

Thus, some works clearly develop integrative approaches, either by integrating 'the quality dimensions identified into a model of institutional quality of HE' (Rodman et al., 2013), or by exploring an integrative quality model, based on the concept of quality culture (Horine & Hailey, 1995; Hergüner & Reeves, 2000).

Furthermore, we find articles suggesting the need for integration of the QM practices in the broader management system of HEIs (Bagautdinova et al., 2013), and stating that the implementation of QM practices in an university should be an integral part of the development of the university (Dynan & Clifford, 2001) and of their strategic plan (Bender & Siller, 2006).

In relation to the methodological approach, and on comparing integration in both empirical and theoretical literature, we did not observe any major differences between the two bodies of literature; instead, they present a similar pattern with respect to high integration scores.

Considering integration for the three levels analysed, we observe that the majority of the articles covering process and organisational levels are concentrated at the lowest integration levels, while at the level of QM principles, articles are concentrated at the highest integration levels.

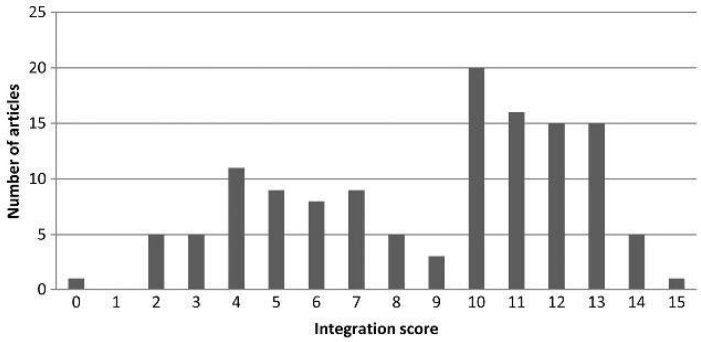

Figure 3. Integration score.

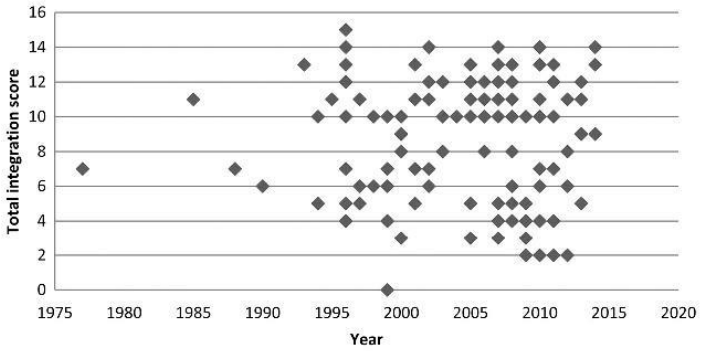

Figure 4. Temporal analysis of the integration score.

In any event, the overall analysis of the articles reviewed shows positive results in terms of integration. Analysing the number of papers per integration score in Figure 3, we see high integration scores in the majority of the articles, one of which achieves the highest integration score of 15. This means that in general, articles use a comprehensive and integrative approach to QM.

However, we did not find significant correlations for either the quality measures of the journals or the number of citations of the articles, when compared with their integration score, or the methodological approach. In this respect, there are no patterns or particular trends.

Also, the hypothesis stating that levels of integration would be stronger in recent years is not confirmed in our review, as there are no significant differences between the articles from the late 1990s and those from the most recent years (see Figure 4).

Conclusions

The goal of this systematic literature review was to understand how the literature has approached QM in HE, how the main QM principles are being addressed and, more importantly, *integrated* in all processes and organisational levels of universities.

Despite the high number of conceptual articles which appear in our review, there is an obvious trend towards a more empirically based debate, especially after the early 2000s. We believe that this is the most beneficial direction for this debate, as only empirical research can advance our knowledge and understanding of currently unanswered questions in the area. Specifically, such questions revolve around the role of QM systems in improving HEIs, which relate these QM systems to the broader management context of institutions. Nevertheless, it is interesting to observe that the most cited articles are theoretical.

The literature also seems to be concerned with the development of QM frameworks in a holistic way, combining different aspects of quality, ultimately reflecting a high level of integration for the dimensions analysed. Still, despite some of these approaches being dubbed 'holistic', many tend to be 'partial' and 'limited' holistic approaches if we consider the possibilities in terms of those levels and dimensions that can be integrated within HEIs.

However, 'total integration' is present a few times in both the process and organisational levels, and is very often found at the level of QM principles. Furthermore, the tendency for holistic approaches appears to be connected with the discussion and development of QM frameworks (Rosa et al., 2001, 2003; Srikanthan & Dalrymple,

2002, 2005, 2007) which have been imported and adapted from industry. However, such approaches are also associated with the implementation of national models, internal and external quality models, or accreditation systems, although these are less visible (Doherty, 1993; Hergüner & Reeves, 2000; Rosa, Cardoso, Dias, & Amaral, 2011).

In this sense, the literature has been approaching QM practices in an integrated way, responding positively to our research question; QM is being integrated in HEIs at different management levels.

However, the 'total' integration of QM in HEIs does not yet seem to be a reality. It appears that the QM field is still often treated as a separated field, run by a separate department within HEIs, and is not yet an integrated part of the organisation. On this point, we believe that the discussion on the concept of integration could make an important contribution to the field. In other words, QM practices could be more integrated in the broader management context of HEIs, as has been the case in other sectors (Sousa & Voss, 2002). However, the QM literature has yet to define the next step in the drive for an effective integrative approach to HE – ultimately helping improve performance in HE, as similar integrative approaches have done in other organisational fields (Kaynak, 2003).

The study has some limitations. The first of these is associated with the systematisation process and the range of the research. The a priori definition of a research equation, and other inclusion and exclusion criteria, can inadvertently leave out some important articles; of course, it is extremely helpful in delimiting the research in accordance with our goals.

In future research, we aim to contribute to the understanding of the integration of QM in the broader systems of HEIs, undertaking case studies to better understand how integration of QM in the management and governance structures of HEIs occurs.

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No potential conflict of interest was reported by the authors.

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Supplementary Material

A complete list of the literature reviewed for this research can be accessed via the supplemental tab on the article's online page [http://dx.doi.org/10.1080/14783363.2015.1050180].

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Appendix 1: Articles included in the literature review

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Appendix 2. Analysis of the articles by: journal, levels of analysis (processes, organisational and quality management principles), integration score and citations

Authors	Year	Journals	Methodological approach	Processes level (from 0 to 4)	Organisational level (from 0 to 3)	Quality management principles level (from 0 to 8)	Integration score (from 0 to 15)	Citations
Ab-Rahman et al.	2011	International Business Management	Survey	3	2	4	9	6
Adhesonasoi et al.	2014	Human Factors and Ergonomics in Manufacturing & Service Industries	Single case study	1	1	4	6	0
Adelesen	1998	Innovations in Education and Training International	Theoretical	2	3	1	6	0
Asyumele	2003	Higher Education in Europe	Survey	1	1	8	10	12
Asyumele	2007	Academic Leadership	Survey	4	1	8	13	4
Arif	2007	International Journal of Educational Management	Theoretical	1	1	8	10	2
Asif & Searcy	2014	Total Quality Management & Business Excellence	Single case study	4	2	8	14	2
Ayers et al.	1988	Journal of Personnel Evaluation in Education	Theoretical	1	3	3	7	0
Bagautdinova et al.	2013	World Applied Sciences Journal	Theoretical	4	2	5	11	8
Bailey & Bennett	1996	Quality Progress	Theoretical	1	1	3	5	24
Baraudiras-Galdós et al.	2012	Quality Assurance in Education	Survey	1	1	0	2	1
Barnard	1999	Business Communication Quarterly	Survey	1	2	5	8	10
Bayraktar et al.	2008	Total Quality Management & Business Excellence	Survey	1	3	8	12	19
Becker & Brookes	2006	Quality Assurance in Education	Single case study	2	2	8	12	32
Becker & Brookes	2008	The Journal of Hospitality, Leisure, Sport and Tourism Education	Theoretical	2	3	8	13	15
Bendar & Silber	2006	Quality in Higher Education	Single case study	2	3	7	12	4
Bilen	2010	International Journal of Productivity and Quality Management	Theoretical	2	1	8	11	10
Billing	1996	Total Quality Management	Single case study	4	3	8	15	3
Brewer et al.	2002	Quality Progress	Survey and case study	1	2	2	5	3
Brickhanov et al.	2010	Russian Education and Society	Survey	2	2	2	6	1
Burgar	1994	Research in Higher Education	Single case study	1	1	7	9	1
Burkhalter	1996	Total Quality Management	Theoretical	4	2	8	14	12
Calvo-Mora et al.	2005	Total Quality Management & Business Excellence	Theoretical	2	1	8	11	44
Calvo-Mora et al.	2006	Quality Assurance in Education	Survey	2	2	8	12	33
Campatti et al.	2011	Total Quality Management & Business Excellence	Theoretical	1	2	4	7	6
Carter	2003	JAC: A Journal of Composition Theory	Theoretical	3	3	7	13	1
Chen et al.	2014	Total Quality Management & Business Excellence	Theoretical	1	2	7	10	3
Cheung & Tsui	2010	Quality in Higher Education	Theoretical	1	1	3	5	1
Coates	2007	Journal of Higher Education Policy and Management	Theoretical	4	3	4	11	3
Cook et al.	1990	Innovative Higher Education	Survey	2	1	3	6	5
Cruickshank	2003	Total Quality Management & Business Excellence	Theoretical	3	1	8	12	24
Cugini et al.	2014	International Journal of Business Performance Management	Single case study	3	2	8	13	0
Davies	2008	International Journal of Quality and Reliability Management	Multiple case study	4	1	8	13	14
Davies et al.	2007	Quality Assurance in Education	Multiple case study	2	2	6	10	12
Davies et al.	2001	Total Quality Management	Single case study	2	1	8	11	29
De Miguel et al.	2005	Higher Education in Europe	Survey	2	2	1	5	5
Dealtry & Howarth	2008	Journal of Workplace Learning	Survey and case study	1	1	8	10	1
Doherty	1993	Higher Education	Single case study	2	3	8	13	8
Doherty	2008	Quality Assurance in Education	Theoretical	1	3	8	12	24
Dynan & Cliffford	2001	Assessment and Evaluation in Higher Education	Single case study	3	2	6	11	2
Eagle & Brennan	2007	Quality Assurance in Education	Theoretical	1	1	8	10	54

Ehlers	2009	Quality Assurance in Education	Theoretical	1	1	0	2	16
Elmuti et al.	1996	International Journal of Quality and Reliability Management	Survey	1	3	8	12	13
Evans	1996	Quality Progress	Survey	1	1	8	10	0
Ferrin et al.	2001	International Journal of Physical Distribution and Logistics Management	Single case study	1	2	8	11	3
Flumerfelt & Banachowski	2011	Quality Assurance in Education	Survey	3	1	8	12	4
Garrot-Jones & Aylward	2000	Research Evaluation	Survey	2	1	8	11	8
Gibbs et al.	2008	Higher Education Quarterly	Multiple case study	2	1	3	6	7
Grant et al.	2002	Total Quality Management	Theoretical	4	3	0	7	17
Helms & Key	1994	Quality Progress	Survey	2	1	2	5	20
Henderson et al.	2006	Management Decision	Theoretical	3	1	3	7	7
Herbst	1999	Tertiary Education and Management	Theoretical	0	0	0	0	1
Hergiiner & Reeves	2000	Total Quality Management	Single case study	2	1	5	8	12
Ho & Wearn	1996	Innovations in Education and Training International	Theoretical	1	2	4	7	4
Horine & Hailey	1995	Innovative Higher Education	Survey	3	1	6	10	3
Houston	2007	Quality in Higher Education	Theoretical	2	1	6	9	1
Houston & Studman	2001	Assessment and Evaluation in Higher Education	Theoretical	1	2	3	6	19
Jensen	2000	International Journal of Engineering Education	Theoretical	4	1	3	8	2
Juhl & Christensen	2008	Total Quality Management & Business Excellence	Theoretical	3	1	5	9	3
Kaqji & Tambi	1999	Total Quality Management	Survey	2	1	8	11	82
Kettunen	2012	The TQM Journal	Single case study	2	1	8	11	1
Khan & Matlay	2009	Education and Training	Single case study	1	1	2	4	5
Kleijnen et al.	2011	Quality Assurance in Education	Survey	1	1	0	2	6
Law	2010	Quality Assurance in Education	Theoretical	3	3	8	14	9
Lawrence & McCollough	2004	Total Quality Management & Business Excellence	Survey	2	3	5	10	12
Lawrence & Sharma	2002	Critical Perspectives on Accounting	Single case study	3	1	8	12	58
Liao et al.	2010	Total Quality Management & Business Excellence	Theoretical	4	1	8	13	4
Lomas	2007	Quality in Higher Education	Multiple case study	1	1	1	3	30
London	2011	Quality in Higher Education	Survey	2	1	4	7	1
Long	1977	Research in Higher Education	Survey	2	2	3	7	0
Lozier & Teeter	1996	Total Quality Management	Theoretical	3	2	8	13	13
Macy et al.	1998	Innovative Higher Education	Single case study	1	1	8	10	2
Mark	2013	Journal of Higher Education Policy and Management	Theoretical	1	1	3	5	5
Marques	2007	Journal of Management Development	Theoretical	1	1	2	4	1
McClaran	2010	Perspectives: Policy and Practice in Higher Education	Theoretical	1	1	3	5	2
Meirovich & Romar	2006	Quality Assurance in Education	Theoretical	1	1	8	10	15
Mergen et al.	2000	Total Quality Management	Theoretical	1	1	8	10	35
Montano et al.	2005	Total Quality Management & Business Excellence	Survey	1	1	8	10	1
Montesinos et al.	2008	Higher Education in Europe	Theoretical	4	3	2	9	5
Moynihan & Sachdeva	2013	International Journal of Productivity and Quality Management	Single case study	1	3	8	12	0
Osseo-Asare et al.	2005	Quality Assurance in Education	Survey	4	1	8	13	25
Owlia & Aspinwall	1996	Total Quality Management	Survey and case study	1	3	0	4	44
Owlia & Aspinwall	1997	International Journal of Quality and Reliability Management	Theoretical	1	2	8	11	38
Papadimitriou	2010	Electronic Journal of Business Research Methods	Survey and case study	1	1	8	10	0
Papadimitriou	2011	Tertiary Education and Management	Multiple case study	3	1	8	12	1
Papadimitriou & Westerheijden	2010	The TQM Journal	Survey	3	2	8	13	6

Pariseau & McDaniel	1997	International Journal of Quality and Reliability Management	Theoretical	2	2	1	5	44
Poole	2010	Quality Assurance in Education	Theoretical	3	1	0	4	5
Pratasavitskaya & Stensaker	2010	Quality in Higher Education	Theoretical	2	1	3	6	13
Radojicic & Jeremic	2012	Current Science	Survey	1	1	6	8	5
Rodman et al.	2013	Minerva	Theoretical	3	1	8	12	0
Rosa et al.	2001	Total Quality Management	Survey	4	1	8	13	17
Rosa et al.	2003	Total Quality Management & Business Excellence	Survey and case study	3	1	8	12	8
Rosa et al.	2011	Quality in Higher Education	Theoretical	4	1	8	13	1
Rosa et al.	2006	Quality in Higher Education	Survey	4	3	6	13	13
Ruben et al.	2007	Leadership and Organization Development Journal	Survey	2	1	8	11	10
Rusinko	2005	International Journal of Sustainability in Higher Education	Single case study	4	1	0	5	8
Sahu et al.	2013	The TQM Journal	Theoretical	3	1	7	11	0
Scott & Hawke	2003	Assessment and Evaluation in Higher Education	Multiple case study	4	1	3	8	3
Sellers-Rubio et al.	2010	Higher Education Quarterly	Survey	3	1	3	7	3
Shera	2008	Social Work Research	Survey	4	1	8	13	4
Sirvanci	1996	Quality Progress	Theoretical	2	2	1	5	43
Sonntag et al.	2009	Assessment and Evaluation in Higher Education	Survey	1	1	1	3	9
Southwell et al.	2010	Journal of Higher Education Policy and Management	Single case study	2	3	6	11	2
Spencer-Matthews	2001	Assessment and Evaluation in Higher Education	Single case study	1	1	4	6	12
Srikanthan & Dalrymple	2002	Quality in Higher Education	Theoretical	2	2	8	12	42
Srikanthan & Dalrymple	2005	Quality in Higher Education	Theoretical	2	2	8	12	20
Srikanthan & Dalrymple	2007	International Journal of Educational Management	Theoretical	4	2	8	14	22
Takala et al.	2001	Systems Research and Behavioral Science	Theoretical	2	2	5	9	4
Tambi et al.	2008	Total Quality Management & Business Excellence	Theoretical	3	1	8	12	2
Tarí	2006	Journal of Educational Administration	Single case study	2	1	6	9	18
Tasie	2010	Educational Research and Reviews	Theoretical	1	1	8	10	0
Taylor & Karr	1999	Innovative Higher Education	Multiple case study	1	2	3	6	1
Taylor & Braddock	2007	Journal of Higher Education Policy and Management	Theoretical	2	1	2	5	21
Taylor	1985	Assessment and Evaluation in Higher Education	Single case study	2	3	6	11	0
Titus	2008	Sociological Perspectives	Single case study	1	2	1	4	12
Torgersen & Torgersen	1997	International Journal of Production Economics	Theoretical	2	2	2	6	2
Trivellas & Dargenidou	2009	The TQM Journal	Survey	1	1	3	5	4
Van Kemenade et al.	2011	International Journal of Quality and Reliability Management	Survey	1	1	2	4	0
Van Kemenade & Hardono	2010	Quality in Higher Education	Survey	1	1	7	9	3
Van Kemenade et al.	2008	Quality in Higher Education	Theoretical	1	1	8	10	27
Veiga et al.	2013	European Journal of Education	Survey	1	3	6	10	0
Venkatraman	2007	Quality Assurance in Education	Theoretical	1	1	6	8	35
Watkins	1997	Tertiary Education and Management	Theoretical	1	2	8	11	0
Widrick et al.	2002	Total Quality Management	Theoretical	1	1	7	9	14
Willis & Taylor	1999	Total Quality Management	Theoretical	2	1	2	5	14
Zineldin et al.	2011	Quality in Higher Education	Theoretical	1	1	8	10	3

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The European standards and guidelines for internal quality assurance

An integrative approach to quality management in higher education?

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Abstract

Purpose – The authors' thesis statement is that the literature on quality management in higher education is evolving towards an idea of integration. Considering Part 1 of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) (ENQA, 2009) to be a framework for the implementation of quality management practices in universities, the purpose of this paper is to understand whether the ESG represent a truly integrated quality management model.
Design/methodology/approach – The authors analyse the content of the ESG taking into account three levels of analysis: the process level, the organisational level and the quality management principles level.
Findings – The analysis shows that the ESG are a quality management model, covering different processes, organisational levels and quality management principles. This is despite not being a truly integrated quality management model. Indeed, the ESG are mainly focussed on teaching and learning and on support processes, neglecting other processes of universities, such as research and scholarship and the third mission. In addition, they leave aside quality management principles more directly linked with a systemic and holistic approach to quality, such as the system approach principle.
Originality/value – The paper presents a new analysis of a much discussed quality management model for higher education. It explores the ESG in the light of the concept of integration, discussed according to a new framework of analysis. It also highlights the importance of a broader reflection on these standards and of their integration in the management systems of institutions.

Keywords Quality management, Integration, Higher education, ESG
Paper type Research paper

Introduction

The literature shows that universities seem to be integrating their quality management practices at different levels (Horine and Hailey, 1995; Manatos *et al.*, 2015; Rodman *et al.*, 2013; Rosa *et al.*, 2001; Srikanthan and Dalrymple, 2007). Integration is defined here as the development of quality management practices as part of wider management systems within the organisation. Such practices cover the different processes and organisational levels,

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whilst including the implementation of the whole set of principles that has come to be associated with the concept of quality management.

In particular, the case of quality management integration in universities can be considered more interesting than most other industries, as universities bring to the fore the issue of integration in traditionally fragmented and loosely coupled organisations (Cohen *et al.*, 1972; Frølich *et al.*, 2013; Orton and Weick, 1990; Weick, 1976). This is a different situation from for-profit organisations, which tend to be associated with more unitary strategies and stronger leadership; or even from other public services, which tend to have a strong unifying Weberian regime.

In this context, the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) (ENQA, 2009), enforced by the European Network for Quality Assurance (ENQA), appear as a reference model, providing guidance and assistance to universities in their internal quality assurance systems and to agencies in their external quality reviews.

In the business sector, quality management models, such as the ISO 9000 standards and the EFQM Excellence Model, have played an important role for companies, assisting them in developing and implementing quality management systems. The impact and the visibility of the ISO standards outweigh those of the EFQM, probably due to the fact that the latter does not grant certification, but only an "excellence award" (Iñaki *et al.*, 2006).

The ESG can be just as relevant to universities in the European Higher Education Area as the ISO standards have been to industrial companies in their role of a "facilitator" in the diffusion of quality management in organisations world-wide (Kaynak, 2003).

Indeed, and despite the fact that the ESG do not ensure certification, some of the national accreditation agencies are using Part 1 of the ESG (for internal quality assurance) to certify the quality management systems of universities. Moreover, the agencies must meet the standards and guidelines of Part 3 of the ESG (for external quality assurance agencies) in order to be affiliated with ENQA.

Naturally, the ESG and the ISO 9000 standards play their roles in particular and different contexts, but in general they both emerge from a global world, and they are both a form of quality management for products or services. Indeed, in a global context, where companies establish relationships with several suppliers world-wide, ISO 9000 standards aim to provide a guarantee to companies that those suppliers are trustworthy. A similar story exists in the case of higher education with the emergence of the European Higher Education Area. The ESG that resulted aim to assure the quality of universities' processes, activities and services for all stakeholders involved.

The impact and success of the ISO standards are indisputable. For one thing certification leads to more competiveness and external visibility, notwithstanding the fact that companies often have no alternative but to undergo ISO certification (Sampaio *et al.*, 2010; Singels *et al.*, 2001). In higher education, some of the accreditation agencies affiliated to ENQA, such as those in Portugal, Spain, Finland, Norway and Austria, have already started to audit, certify and accredit the internal quality management systems of universities, based on compliance with the ESG. The original goal was to provide guidance for universities to develop their quality management systems. In this regard, the national agencies developed audit processes in their countries, such as Spain, Finland and Norway. In other countries these processes even led to accreditation, as is the case in Germany (where the accreditation process is conducted by the Austrian Agency for Quality Assurance and Accreditation), or certification of the internal quality management systems, as is the case in Portugal. This practice is not yet common to all the countries in the European Higher Education Area, but it appears to be growing. In this sense, the ESG can play a similar role in higher education to that played by the ISO standards globally.

As such, we aim to understand whether the ESG reflect the trend in higher education towards the integration of quality management practices in higher education institutions. Concretely, we aim to understand whether the ESG cover the universities' main processes (teaching and learning, research and scholarship, third mission and support processes) (Barnett, 1990); the different organisational levels (programme, unit and institutional level) (Brennan and Shah, 2000); and the different quality management principles (ISO, 2012): customer focus, leadership, involvement of people, process approach, system approach, continuous improvement, factual approach to decision making and mutually beneficial supplier relationship.

ESG as an integrated quality management model

The literature shows that a more integrative vision of quality management practices is being proposed and implemented (Horine and Hailey, 1995; Manatos *et al.*, 2015; Rosa and Amaral, 2007; Srikanthan and Dalrymple, 2007). From this perspective, quality management is part of an integrated organisational system which, according to Kettunen (2012, pp. 520, 521), "is representative of how an organisation is structured, and how each process is related to other processes […] forming a total system".

Similarly, universities seem to be working in order to integrate their main processes – research and scholarship, teaching and learning, third mission and support processes – and their management practices into their wider governance and management system (Melo *et al.*, 2010; Rodman *et al.*, 2013; Rosa *et al.*, 2001, 2003; Srikanthan and Dalrymple, 2002, 2005, 2007), reflecting practices in organisations from other sectors (Sousa and Voss, 2002). Moreover, we argue that there is a trend towards the development of holistic and comprehensive quality management frameworks (Rosa *et al.*, 2001; Srikanthan and Dalrymple, 2002, 2007), which have been imported and adapted from industry into education, and to the implementation of national models, either for internal or external review purposes, or accreditation systems (Doherty, 1993; Hergüner and Reeves, 2000; Rosa *et al.*, 2011).

In fact, the pressures of society for greater accountability led governments and universities to implement organised quality assurance systems in higher education all over Europe. The adoption of the Lisbon Recognition Convention (1997), for the recognition of qualifications in the European Higher Education Area, was a strong boost to these developments. Moreover, the Bologna process established the promotion of European co-operation in quality assurance with a view to developing comparable criteria and methodologies as one of the main strands of work (Bologna Declaration, 1999). This became one of the main driving forces of quality assurance in Europe and resulted in the creation of ENQA (European Association for Quality Assurance in Higher Education) in 2000 (Prikulis *et al.*, 2013).

The ESG were developed by ENQA in co-operation with the European University Association, the European Student Information Bureau and the European Association of Institutions in Higher Education (EURASHE) (ENQA, 2009). This initiative was a response to demands from the Berlin Communiqué (2003) to "develop an agreed set of standards, procedures and guidelines on quality assurance (and) to explore ways of ensuring an adequate peer review system for quality assurance and/or accreditation agencies or bodies" (ENQA, 2009, p. 5). The result was the development of European standards and guidelines for internal and external quality assurance within universities (Part 1 and 2 of ESG, respectively) and of European standards for external quality agencies (Part 3 of ESG) (ENQA, 2009). The goal of the ESG is "to provide a source of assistance and guidance to both universities in developing their own quality assurance systems and agencies undertaking external quality assurance, as well as to contribute to a common frame of reference, which can be used by institutions and agencies alike. It is not the intention that

these standards and guidelines should dictate practice or be interpreted as prescriptive or unchangeable" (ENQA, 2009, p. 13). Thus, the ESG are a reference model providing guidance to universities for the implementation of their internal quality management systems and to the external accreditation and evaluation agencies (ENQA, 2009; Prikulis *et al.*, 2013).

In 2015, ENQA developed a revised version of the ESG, since "considerable progress has been made in quality assurance as well as in other Bologna action lines […] all these contributing to a paradigm shift towards student-centred learning and teaching" (ENQA, 2015, p. 3). However, the present work focusses on the original version of the ESG which is presented in Table I.

Thus, the ESG claim to be an integrated concept and framework for quality assurance with a broad applicability aiming to contribute to building the path towards a holistic quality management approach to quality in higher education. This ideal goes beyond quality assurance and brings quality to the core of the management and governance systems, involving all stakeholders and all the organisational levels of universities, in an integrated way (Hopbach, 2013).

Theoretical framework

We developed a framework to discuss to what extent the ESG represent a truly integrated quality management model for the implementation of internal quality management systems in European universities. This framework presents three different levels. Following the literature, these are the most significant levels in terms of understanding the different approaches to quality management in higher education, as well as for reaching conclusions about the degree of integration of quality management in universities (see Table II).

Standards		Description
ESG 1	Policy and procedures for quality assurance	"Institutions should have a policy and associated procedures for the assurance of the quality and standards of their programmes and awards. They should also commit themselves explicitly to the development of a culture which recognises the importance of quality, and quality assurance, in their work. To achieve this, institutions should develop and implement a strategy for the continuous enhancement of quality. The strategy, policy and procedures should have a formal status and be publicly available. They should also include a role for students and other stakeholders"
ESG 2	Approval, monitoring and periodic reviews of programmes and awards	"Institutions should have formal mechanisms for the approval, periodic review and monitoring of their programmes and awards"
ESG 3	Assessment of students	"Students should be assessed using published criteria, regulations and procedures which are applied consistently"
ESG 4	Quality assurance of teaching staff	"Institutions should have ways of satisfying themselves that staff involved with the teaching of students are qualified and competent to do so. They should be available to those undertaking external reviews, and commented upon in reports"
ESG 5	Learning resources and student support	"Institutions should ensure that the resources available for the support of student learning are adequate and appropriate for each programme offered"
ESG 6	Information systems	"Institutions should ensure that they collect, analyse and use relevant information for the effective management of their programmes of study and other activities"
ESG 7	Public information	"Institutions should regularly publish up to date, impartial and objective information, both quantitative and qualitative, about the programmes and awards they are offering"

Table I.
European standards and guidelines for internal quality assurance within higher education institutions

Levels of analysis	Dimensions
Processes level	Teaching and learning
	Research and scholarship
	Third mission
	Support processes
Organisational level	Programme
	Basic unit
	Institution
Quality management principles level	Customer focus
	Leadership
	Involvement of people
	Process approach
	System approach
	Continuous improvement
	Factual approach
	Mutually beneficial supplier relationship

Table II.
Framework of analysis

According to the literature, universities have three main processes or missions (Scott, 2006): teaching and learning; research and scholarship; and the third mission, which in turn are augmented by the support processes to those three missions (Barnett, 1990).

The processes and the roles of universities have been evolving, as both the societal roles played by universities and their relationship to society evolve (Jongbloed *et al.*, 2008; Pinheiro *et al.*, 2012). Universities started as teaching and learning organisations, but as Barnett (1990) states: their missions go well beyond teaching and learning. Universities have continually evolved to accommodate new tasks and functions (Pinheiro *et al.*, 2012). In this context and in what Etzkowitz (2003) calls the first "academic revolution", research and scholarship became also a core university process. More recently, the calls for a re-engagement of universities in helping to tackle the great challenges facing societies and local communities and in contributing to societal and economic growth in general, gave rise to a second "academic revolution" and to the emergence of the third mission (Pinheiro *et al.*, 2012). The first mission of education inspires the second mission of research that in turn leads to a university's third mission for social and economic development (Etzkowitz, 2008; Sam and van der Sijde, 2014).

Despite some "tensions" and "ambiguities" in the notion of the third mission (Pausits, 2015; Pinheiro *et al.*, 2015), it can be defined as "the generation, use, application and exploitation of knowledge and other university capabilities outside academic environments" (Molas-Gallart *et al.*, 2002, pp. iii, iv). The third mission is then the engagement of universities in business-related activities, local and regional development, economic growth and societal development in general (Laredo, 2007), and simultaneously "the driving force to continue the opening of the universities, to initiate an exchange outside the scientific system, and to find answers to social issues" (Pausits, 2015, p. 272).

To these three main missions or processes of universities, we must add a forth process which covers all sorts of services and processes, ranging from administrative services to other support processes and activities to the other three main missions: the support processes (Yeo and Li, 2014).

The organisational levels we consider are the programme, as offered by universities; the unit (department, faculty or other basic unit) of universities; and institution, when there is a broader focus in terms of the organisational structure of universities (Brennan and Shah, 2000).

Finally, we consider the eight quality management principles that underline the ISO 9001 standards (ISO, 2012). Customer focus means the importance universities place on customer

identification and on meeting their requirements. Leadership is related to the role of management bodies in universities, their work in defining the mission, the values and the goals of the universities, the promotion of a quality culture and the promotion of the involvement of people in quality management. Involvement of people is translated into the efforts to involve the people working in universities (academic and non-academic staff and students) in the quality management process. The process approach has to do with the management of the different missions of universities (teaching and learning, research and scholarship, third mission and support processes) as processes, i.e. as a set of interrelated activities which turn inputs into outputs. The system approach to management is related to the management of the different processes, units and services of universities in an integrated way. Continuous improvement translates the efforts of universities to continually improve their quality. A factual approach to decision making, as the name suggests, means that decisions in universities are based on the analysis of data and information provided by different sources. Finally, the principle of a mutually beneficial supplier reflects universities' desire to develop relationships with suppliers, but as we consider this notion limitative, we consider all the external stakeholders, such as parents, secondary schools, future employers, local community and the society as a whole, similar to the proposals contained in the new version of the ISO 9000 standards (ISO, 2015).

Methodology

Drawing on our analysis framework, we developed a content analysis of the seven ESG using the NVivo software. In order to assure the credibility of our analysis, validation was carried out by "investigator triangulation" (Bryman, 2004). In this sense, the three investigators participating in this study were involved in the analysis process, specifically in codifying the ESG according to the different levels and dimensions of analysis. The codification of the investigators was then compared and discussed until a consensual result was reached.

Thus, we analysed to what extent the three levels and their dimensions were reflected in the seven ESG with reference to the following scale: highly reflected, substantially reflected, partially reflected and insufficiently reflected. In the end, we made an overall analysis of how well the different levels and dimensions were represented in the ESG. This global perspective is important as it helps to show to what extent the levels and dimensions are covered in the ESG as a whole rather than focussing on each of the seven ESG individually.

Results

The ESG can be seen to reflect several quality management principles, organisational dimensions and processes (see Table III).

Processes level: the focus on teaching and learning

The ESG are mostly focussed on teaching and learning. This process is reflected in the majority of the ESG.

ESG 1, which represents a very general approach to the policy and procedures for quality management, is the only standard covering three processes. It mainly covers teaching and learning, and the "policy and associated procedures for the assurance of the quality and standards of their programmes and awards". It partially covers research and scholarship, since it states that "the policy statement is expected to include the relationship between teaching and research in the institution" (ENQA, 2009, p. 6). And it substantially reflects the support processes to teachers and learners that will help its students achieve the intended outcomes.

ESG		ESG 1	ESG 2	ESG 3	ESG 4	ESG 5	ESG 6	ESG 7	Overall
Processes	Teaching and learning	HR	HR	HR	SR	PR	PR	HR	Highly
	Research and scholarship	PR	IR	IR	IR	IR	IR	IR	Insufficiently
	Third mission	IR	IR	IR	IR	IR	IR	IR	Insufficiently
	Support processes	SR	PR	PR	HR	HR	HR	PR	Substantially
Organisational Level	Programme	PR	PR	PR	IR	IR	IR	PR	Partially
	Unit	PR	IR	IR	IR	IR	IR	IR	Insufficiently
	Institution	HR	HR	HR	HR	HR	HR	HR	Highly
Quality management principles	Customer focus	PR	PR	PR	IR	HR	IR	HR	Substantially
	Leadership	HR	IR	IR	HR	HR	IR	IR	Substantially
	Involvement of people	SR	SR	IR	HR	IR	IR	IR	Substantially
	Process approach	PR	HR	HR	IR	IR	IR	IR	Substantially
	System approach	PR	IR	IR	IR	IR	IR	IR	Insufficiently
	Continuous improvement	HR	SR	IR	PR	HR	PR	IR	Substantially
	Factual approach	IR	SR	HR	PR	IR	HR	PR	Substantially
	Mutually beneficial supplier relationships	SR	PR	IR	IR	IR	IR	PR	Partially

Notes: HR, highly reflected; SR, substantially reflected; PR, partially reflected; IR, insufficiently reflected

Table III.
Analysis of ESG, according to 3 levels of analysis

The other ESG combine teaching and learning and support processes. ESG 2 and 3 are highly focussed on teaching and learning and only partially on support processes. ESG 2 mostly focusses on the "approval, monitoring and review of programmes and awards" but also points out that "the quality assurance of programmes and awards are expected to include […] availability of appropriate learning resources" (ENQA, 2009, p. 17). Similarly, ESG 3 is mostly about the assessment of students, the associated criteria, regulations and procedures, but also highlights the importance of the support structures which support student learning, as well as the "administrative checks to ensure the accuracy of the procedures" (ENQA, 2009, p. 17).

ESG 4 is highly focussed on support processes and substantially on teaching and learning. It is mainly focussed on support processes and on the resources which assure the quality of teaching staff, but also stresses that teaching staff is "the single most important learning resource available to most students" (ENQA, 2009, p. 18).

ESG 5 and 6 are highly focussed on support processes and only partially on teaching and learning. ESG 5 emphasises "the resources available for the support of student learning" which should be "adequate and appropriate for each programme offered", and ESG 6 is related with the information systems, "which collect, analyse and use relevant information" (ENQA, 2009, pp. 18-19).

ESG 7 mostly covers teaching and learning, with partial reference to the support processes. Here the focus is on the information which the institutions should provide "about the programmes they are offering, the intended learning outcomes of these, the qualifications they award, the teaching, learning and assessment procedures used, and the learning opportunities available to their students" (ENQA, 2009, p. 19).

None of the ESG cover the process of the third mission.

An overall analysis of the ESG, allow us to conclude that teaching and learning and support processes are highly and substantially represented, respectively, but research and scholarship and third mission are insufficiently represented.

Organisational level: the focus on micro and macro dimensions

Most of the ESG focus on the micro and on the macro dimensions of the organisational level. Consequently, the most important level is the institution, where the procedures regarding the

teaching and learning process are defined. The next most important level is the programme, where all the processes which support the management of the programme happen.

ESG 1 is alone in covering all the dimensions of the organisational level. Despite being mostly focussed on the institutional level, this ESG states that "the policy and associated procedures for the assurance of the quality and standards of their programmes and awards" should involve all the levels of the institution. This effectively refers to not just the micro and macro levels, but also "the departments, schools, faculties and other organisational units and individuals" (ENQA, 2009, p. 16).

ESG 2, 3 and 7 provide in-depth coverage of the institution and partially cover the programme. The formal mechanisms for the approval, periodic review and monitoring of programmes and awards are defined in ESG 2 at the institutional level, as well as the programme level. Here, ESG 2 pays attention to the "development and publication of explicit intended learning outcomes", the "specific needs of different modes of delivery […] and types of higher education […]" and the "regular periodic reviews of programmes" (ENQA, 2009, p. 17). Student assessment procedures are defined at the institutional level in ESG 3. However, the programme level also plays a role, since "students should be clearly informed about the assessment strategy being used for their programme, what examinations or other assessment methods they will be subject to, what will be expected of them, and the criteria that will be applied to the assessment of their performance" (ENQA, 2009, p. 17).

According to ESG 7, the responsibility to "regularly publish up-to-date, impartial and objective information, both quantitative and qualitative, about the programmes and awards" not only lies with the institution as a whole, but also with the programmes themselves (ENQA, 2009, p. 19).

Finally, ESG 4, 5 and 6 only cover the institutional level. The quality of the teaching staff is addressed in ESG 4, which stresses that the institution plays a crucial role in staff recruitment. As such, teaching staff must show a satisfactory level of competences. At the same time, it should be the case that "teaching staff (are) given the opportunities to develop and extend their teaching capacity" and that it has the "means to remove them from their teaching duties if they continue to be demonstrably ineffective" (ENQA, 2009, p. 18).

ESG 5 addresses the importance of the learning resources and the structures that the institution should develop in order to support the learning process in the different programmes.

Finally, information systems are covered in ESG 6, which notes the role of the institution in the collection, analysis, use and publication of relevant information, concerning the university as a whole and its programmes, in particular.

Globally, we observe that the ESG cover the institutional level very well, the programme level is only partially covered and the unit level is given insufficient coverage.

Quality management principles level: the lack of a systemic approach to quality management

Customer focus is one of the principles given most coverage. This is reflected in all the ESG, except for ESG 4 and 6. ESG 5 and 7 are the central standards covering this area. In ESG 5 the focus is on the "learning resources and other support mechanisms (which) should be readily accessible to students, designed with their needs in mind and responsive to feedback from those who use the services provided". ESG 7 focusses on publishing information for the main customers of the institutions. At the same time, the principle of customer focus is also touched upon in the other ESG. ESG 1 focusses on the students and notes that universities should have the mechanisms to "help […] students achieve those outcomes" and "should aspire to improve and enhance the education they offer their students" (ENQA, 209, p. 16). Also, ESG 2 focusses on students and their needs, stating that "the quality assurance of programmes and awards are expected to include […] specific needs of different modes of

delivery (e.g. full time, part-time, distance learning, e-learning) and types of higher education (e.g. academic, vocational, professional)" (ENQA, 2009, p. 17). ESG 3, covering student assessment, highlights the need for students to "be clearly informed about the assessment strategy being used for their programme, what examinations or other assessment methods they will be subject to, what will be expected of them, and the criteria that will be applied to the assessment of their performance" (ENQA, 200, p. 18).

The principle of factual approach is also covered in all principles except two (ESG 1 and 5). ESG 6 is mostly about the factual approach principle since it emphasises the need to "collect, analyse and use relevant information" about "student progression and success rates", "employability of graduates", "effectiveness of teachers", "profile of the student population", "learning resources available and their costs" and "the institution's own key performance indicators", in order to allow institutions to effectively manage their "programmes of study and other activities" (ENQA, 2009, p. 19). Similarly, ESG 3 has a factual approach to decision making, insofar as "students should be assessed using published criteria" and the assessment procedures should "be designed to measure the achievement of the intended learning outcomes and other programme objectives" and "have clear and published criteria for marking" (ENQA, 2009, p. 17). ESG 2 has a partially factual approach to decision making, as far as it relies on the "development and publication of explicit intended learning outcomes" and on the "monitoring of the progress and achievements of students" (ENQA, 2009, p. 17). The quality of the teaching staff is covered in ESG 4, which states that the competencies and qualifications of teachers "should be available to those undertaking external reviews, and commented upon in reports". Moreover, teachers should "access feedback on their own performance", and therefore practice a factual approach to decision making (ENQA, 2009, p. 18). Finally, ESG 7 partially integrates this principle, since an institution "should verify that it meets its own expectations in respect of impartiality and objectivity" (ENQA, 2009, p. 19).

Like the principles of customer focus and a factual approach to decision making, the principle of continuous improvement is also present across almost all the ESG (all except ESG 3 and 7). ESG 1 and 5 make strong reference to this principle. The first ESG states that "institutions should develop and implement a strategy for the continuous enhancement of quality", that the policy for quality assurance must be "implemented, monitored and revised" and that "all higher education institutions should aspire to improve and enhance the education they offer" (ENQA, 2009, p. 16). ESG 5 also stresses that "institutions should routinely monitor, review and improve the effectiveness of the support services available to their students" (ENQA, 2009, p. 18). Similarly, ESG 2 highlights that institutions should guarantee "that programmes (are) well-designed, regularly monitored and periodically reviewed, thereby securing their continuing relevance and currency" (ENQA, 2009, p. 17). ESG 4 and 6 only partially cover the principle of continuous improvement. The teaching staff quality ESG states that "institutions should provide poor teachers with opportunities to improve their skills" and the information systems ESG emphasises that the collection, analysis and use of relevant information allows institutions to compare themselves with other similar organisations, which in turn "allows them to extend the range of their self-knowledge and to access possible ways of improving their own performance" (ENQA, 2009, pp. 18, 19).

The importance of the involvement of the people in the quality management area is emphasised by three of the seven standards in different ways. ESG 4 makes strong reference to this principle, highlighting the importance of the involvement of the teaching staff, as "the single most important learning resource" for students (ENQA, 2009, p. 18). ESG 1 substantially stresses the "role for students and other stakeholders" in the strategy, policy and procedures for quality assurance of universities (ENQA, 2009, p. 16). ESG 2 also emphasises that "the quality assurance of programmes and awards are expected to include

[…] participation of students in quality assurance activities", who are not only seen as customers but also as internal members of the organisation which participate in the quality assurance of programmes and awards (ENQA, 2009, p. 17).

As with the previous principles, the principle of leadership appears primarily in three ESG: 1, 4 and 5. Actually, the first ESG is mostly about leadership; this is because the strategy, the policy and the procedures for quality come under its remit. Leadership is also strongly referenced in ESG 4, since institutions must assure the quality of their staff and "that staff involved with the teaching of students are qualified and competent to do so" (ENQA, 2009, p. 18). Similarly, the principle of leadership has a marked presence in ESG 5, since institutions must assure the resources for the smooth functioning of the institution.

The principle of a process approach is also covered in three ESG: 1, 2 and 3. The first ESG only partially refers it when it states that the programmes should "have clear and explicit intended outcomes" (ENQA, 2009, p. 16). ESG 2 refers to a process approach, since it focusses on the logic of the management of the process of teaching and learning, which should be monitored and periodically reviewed. ESG 3 can also be seen to adopt a process approach, if we consider student assessment as a process, which must follow "regulations", "procedures" and "criteria" (ENQA, 2009, p. 17).

The principle of mutually beneficial supplier relationships is, overall, only partially reflected in the ESG. As stated above, if we consider that this principle embraces all the external stakeholders of universities, then ESG 1 makes it a central theme since it provides a role for students and other stakeholders in the policy and procedures for quality assurance. ESG 7 partially covers the principle, since the information which institutions should regularly publish, should be available to all the stakeholders. ESG 2 also mentions the stakeholders, stating that "the confidence of students and other stakeholders in higher education is more likely to be established and maintained through effective quality assurance activities" (ENQA, 2009, p. 17).

Finally, the principle of a system approach is only partially included in ESG 1. In this respect, emphasis is given to the relationship between two main processes of higher education: "the relationship between teaching and research", which should be included in the policy statement of the universities (ENQA, 2009, p. 16).

Globally, the quality management principles addressed by the ESG indicate that they represent a quality management model, particularly focussed on its customers; concerned about informed decisions, continuous improvement and involvement of people; based on a process approach and on a strong leadership. The ESG also focus on the involvement of external stakeholders in universities, but only partially. Furthermore, they do not represent a truly integrated quality management model, since the principle more directly linked with a systemic and holistic approach (the principle of system approach) is insufficiently represented in the ESG. The ESG seem to mainly represent a collection of procedures and not a set of integrated processes. If we analyse this last result in light of the new quality management principles, we conclude that this gap may no longer exists, since the principle of a system approach is no longer explicitly stated in the new principles. However, the conclusions regarding the principle of a process approach would also be different since the new principle of a process approach states that the activities of the organisations should be "understood and managed as interrelated processes that function as a coherent system", which as we mentioned above does not happen in the ESG (ISO, 2015, p. 6). Thus, the absence of the idea of a system approach (i.e. the management of a university as a coherent and interrelated whole) still stands out in the ESG.

Conclusions

The integration of quality management practices in universities seems to be a trend in the higher education literature, partially translated into the development of quality

management frameworks, internal quality management systems and national accreditation and assessment systems (Melo *et al.*, 2010; Rodman *et al.*, 2013; Rosa *et al.*, 2001; Srikanthan and Dalrymple, 2002, 2007).

In this context, the ESG appear as a reference model in higher education, helping universities to implement their internal quality management systems and guiding national accreditation agencies (Prikulis *et al.*, 2013).

In this paper, we sought to understand whether the ESG are an integrated quality management model, i.e. whether they address the four main processes of universities, the different organisational levels and also the eight quality management principles.

Assessing the ESG according to the aforementioned levels of analysis shows that they are not a truly integrated quality management model, since there are some gaps in the different dimensions of analysis. Naturally, we were not expecting that all the levels and dimensions were present in all the ESG, but we would expect that overall the levels and dimensions were addressed by the ESG as a whole.

For the process level, it is clear that the ESG are focussed on teaching and learning and, in general, do not integrate the other processes of universities. In this sense, the ESG are clearly a teaching and learning-oriented model. It is true that the support processes are substantially reflected in the ESG, however, they often relate to the processes which support teaching and learning. This is an important gap in the ESG, which some European accreditation agencies are addressing by introducing new standards and guidelines concerning research and scholarship, third mission and internationalisation, as is the case with A3ES in Portugal (Santos, 2011).

Indeed, there is a clear separation between teaching and learning and the other processes of universities. This it is not surprising, since the ESG were actually developed for teaching and learning. Thus, despite claims that the ESG serve as a holistic model (Hopbach, 2013), they are, admittedly, teaching and learning oriented. Consequently, research and scholarship, and the third mission are mostly missing from the ESG. Research and scholarship get a brief mention in ESG 1, but the third mission is totally absent.

At the organisational level, the ESG provide significant coverage of the micro and the macro dimensions (i.e. programme and institution), and little coverage of the intermediate level of the constituent units. It is true that often the constituent units have autonomy, and some act in fact as the institution. Nevertheless, the ESG do not seem to take into consideration how institutional policies and practices are translated and deployed until they reach the programme level.

Taking into account the quality management principles, we observe that, generally, there is a positive "representation" of the quality management principles in the ESG, even if they are not homogeneously integrated in the different standards and guidelines. Most of the principles are given substantial attention, with the exception of the principle of mutually beneficial supplier relationships, since the involvement of the external stakeholders seems to play a minor role in the ESG, and the principle of system approach, understood as an effective interrelationship among the different institutional processes, is not foreseen in the ESG.

In summary, the ESG seem to be a quality management model, going beyond quality assurance, as they are also based on continuous improvement and not only based on planned procedures, discipline, control, monitoring and feedback. However, they seem to be failing in effectively working as global model to guide universities, in integrating all the core processes of universities, and in working more as a systemic quality management model and less as a collection of quality management procedures.

We tend to believe that this situation will prevail. If we look into the new version of the ESG, it seems that it introduces some changes mainly at the level of teaching and learning, but does not seem to change their focus, since it does not make particular reference to other

processes, organisational dimensions or quality management principles (ENQA, 2015; Hopbach, 2013). Indeed, it looks like teaching and learning remains the main focus of the ESG and that the other processes remain neglected. At the organisational level, the standards also seem to remain mainly targeted at the micro and macro levels. One of the quality management principles that seems to continue to receive most attention is customer focus, with a stronger emphasis on students as the main customers. Two, instead of one ESG are now dedicated to student learning, i.e. ESG 3, centred on "student-centred learning teaching and assessment" and ESG 4, focussed on "student admission, progression, recognition and certification" (ENQA, 2015, pp. 12, 13). Continuous improvement seems to continue to be a theme of interest, particularly since the new version has two ESG in this area (9 and 10) focussed, respectively, on "on-going monitoring and periodic review of programmes" and on "cyclical external quality assurance" (ENQA, 2015, pp. 9, 10). Moreover, these new ESG seem to continue to highlight the importance of facts for the decision making process. In fact, one important principle of the new version – which we believe has increased from a minor to a major facet in the new ESG – is the process approach. Nevertheless, the system approach principle seems to remain almost totally absent.

Final considerations and recommendations

We firmly believe that the ESG should evolve towards a more integrated approach to quality management inside the universities, be more robust and more capable of doing what the ISO standards have done in their corresponding sector, i.e. assuring the quality and guaranteeing the credibility of the institutions (Kaynak, 2003), while also contributing for their continuous improvement.

We must emphasise what seems to be an important change in this new version of the ESG: the focus on integrating quality management into the broader management context of the universities. Indeed, ESG 1 states that "institutions should have a policy for quality assurance that is made public and forms part of their strategic management" (ENQA, 2015, p. 8). This seems to be something new which the ESG never focussed on before. We believe that it might be an important development towards a more integrated vision of quality management in higher education, and particularly, of the ESG as a more integrated quality management model.

The need to integrate quality management into a broader management context is also stressed by the literature covering the ISO 9000 standards. This reflects the idea that organisations can take full advantage of the ISO 9000 standards benefits if they articulate the certification with the development of a solid quality management system (Gotzamani and Tsiotras, 2002). In the same way, universities who are now undergoing certification of their quality management systems would benefit from integrating their quality management system into their more general management and governance context. In fact, this integration is already an important criterion taken into account by some certifying agencies, and it is consequently a criterion which universities must meet to receive certification of their quality management systems (A3ES, 2013).

A useful advance would be for further work to repeat this study with the new version of the ESG and with the new quality management principles. This would be particularly fruitful exercise when both standards and principles have become more consolidated and better researched.

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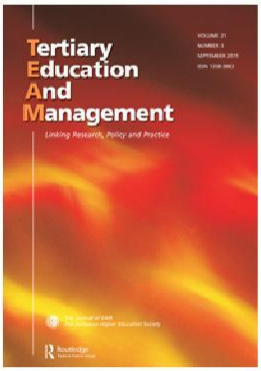

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The importance and degree of implementation of the European standards and guidelines for internal quality assurance in universities: the views of Portuguese academics

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This research seeks to explore academics' perceptions of the importance and degree of implementation of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) for internal quality assurance. It uses empirical evidence from Portugal, gathered via a questionnaire given to all university academics. Results show academics' perceptions of the importance and implementation of the ESG in their institutions to be quite positive. Nevertheless, academics tend to find the standards more important than effectively implemented. Furthermore, significant differences in perceptions emerge between groups of academics. This study intends to contribute to a better understanding of the implementation of quality management practices in universities, and the influence of the ESG in this process.

Keywords: quality management; European standards and guidelines (ESG); Portugal; importance; implementation

Introduction

In recent decades, pressures from society for greater accountability have led governments and universities to implement organised quality assurance systems for higher education throughout Europe. The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) were developed by the European Association for Quality Assurance in Higher Education (ENQA) in cooperation with the European University Association, the European Student Information Bureau and the European Association of Institutions in Higher Education (ENQA, 2009). This development was in response to demands from the Berlin Communiqué (2003) to 'develop an agreed set of standards, procedures and guidelines on quality assurance [and] to explore ways of ensuring an adequate peer review system for quality assurance and/or accreditation agencies or bodies'. This resulted in the development of European standards and guidelines for internal and external quality assurance within universities and for external quality agencies (ENQA, 2009).

Thus, the ESG emerged as a reference model providing guidance and assistance to universities in their efforts to implement internal quality management systems, and to agencies in their external quality evaluations (Prikulis, Rusakova, & Rauhvargers, 2013). One of the main groups of actors in these quality management systems – the

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academics – can adopt different standpoints, which, in practice, tend to translate into different degrees of acceptance, support and adaptation to the quality management idea, policies and implementation procedures (Cardoso, Rosa, & Santos, 2013; Cartwright, 2007; Newton, 2002; Westerheijden, Hulpiau, & Waeytens, 2007). Academics seem to show growing acceptance of quality management, with a positive perception of its introduction, specifically in the case of Portugal (Cardoso et al., 2013; Rosa & Sarrico, 2012).

This paper seeks to analyse how European standards and guidelines for internal quality assurance within universities are being understood and implemented in universities based on a study of Portuguese academics' perceptions. An investigation is made into academics' perceptions of the importance of these standards for quality management as well as their degree of implementation in their institutions. As academics are not a uniform group, and as previous studies have shown that different groups of academics hold different perceptions of quality assessment (Cardoso et al., 2013), we will also analyse how different groups differ in their perceptions of the importance and degree of implementation of the standards.

Quality assurance, the ESG and academics' perceptions

Academics' perceptions of quality assurance

Academics have diverse interpretations of what a quality management system is and what its focal points are (Huusko & Ursin, 2010). Academics can adopt a position towards quality management that varies from resistance and scepticism to acceptance and support. Academics' resistance to quality management is often associated with several recurring factors. The process is bureaucratic (Harvey, 2006) and academics lack time to deal with its requirements, which, inherently, steal time from the really important aspects of academic life, namely teaching and research (Newton, 2002). On top of this, quality management is perceived as an exercise in monitoring and controlling, rather than enhancement and excellence (Cardoso et al., 2013), and academics often have little involvement in the development of quality management procedures (Cardoso et al., 2013).

Even so, academics support quality management. At the time of writing, there are few reasons for academics to adopt a pessimistic discourse of resistance and scepticism concerning quality management models (Stensaker, Välimaa, & Sarrico, 2012), and recent studies in Portuguese universities show that academics as a group accept and support quality management in their universities (Cardoso et al., 2013; Rosa, Sarrico, & Amaral, 2012). Academics tend to be supportive 'towards quality assessment … namely its possible goals and purposes' (Cardoso et al., 2013, p. 109), and especially towards ideals of 'improvement' and 'communication'. Such outcomes are seen as capable of inducing improvement, especially in teaching and learning (Rosa et al., 2012, pp. 363–364), hence benefiting students, as well as academic work and decision-making processes (Huusko & Ursin, 2010; Kleijnen, Dolmans, Willems, & van Hout, 2011). Accreditation is also supported by those with managerial roles, who see it as providing the opportunity for institutions to reflect on their mission and purpose and 'to join an elite club' (Bell & Taylor, 2005, p. 248).

ESG awareness and implementation

The European policy for higher education and the national assessment and accreditation agencies have played a crucial role in establishing quality assurance policies and

practices (namely the ESG) in universities (Sarrico, Veiga, & Amaral, 2013a; Veiga & Sarrico, 2014). The European higher education quality landscape has evolved quite rapidly, and by 2010, almost all European universities 'had implemented some form of national quality assurance policy measures' and 'quality assurance has been embedded into … institutional processes' (Kohoutek & Westerheijden, 2014, p. 168). This evolution has been boosted by European entities, which have been encouraging the quality debate in the European higher education area and attempting to create a common understanding of the principles and procedures associated with internal and external quality assurance (ENQA, 2009; Kohoutek & Westerheijden, 2014; Veiga & Sarrico, 2014).

The national accreditation agencies have also played a role in this process. In Portugal, the development of the Agency for Assessment and Accreditation of Higher Education (A3ES) made universities 'more aware of internationalisation' and of the 'exigencies' of the ESG 'with which the ENQA had endowed itself' (Rosa & Sarrico, 2012, p. 259).

In Portugal, 'at the system level, the changes in the legal framework, some influenced by the supranational level, are contributing to raising awareness about quality assurance', and act as facilitators 'to implement quality assurance policy procedures'. In turn, 'by promoting the certification of internal quality assurance systems, [A3ES] converges on the objective of favouring the implementation of ESG Part 1' (Rosa & Amaral, 2014, p. 164).

Nonetheless, even with increasing awareness of quality management practices, the implementation process is not linear and problem free (Gornitzka, Kyvik, & Stensaker, 2005; Sin & Manatos, 2014; Trowler, 2002; Trowler, Saunders, & Knight, 2003). Regarding the ESG, there are two important elements explaining why there is no evidence of an effective implementation (Loukkola & Zhang, 2010; Motova & Pykkö, 2012; Rosa & Amaral, 2014; Westerheijden & Kohoutek, 2014): the non-prescriptive nature of the standards (Prikulis, Rusakova, & Rauhvargers, 2014) and the poor communication of the ESG to universities (Kohoutek, 2014), which seems to have led to a fragmented and non-holistic application (Loukkola & Zhang, 2010).

Nonetheless, the main challenge, which is simultaneously the main factor for the success of ESG implementation, is the need to interpret, adapt and translate (Westerheijden & Kohoutek, 2014): 'the institutional implementation of the ESG should be read in context and should take into account the level of penetration of different governance narratives at national and institutional level' (Veiga & Sarrico, 2014, p. 79). Moreover, and as emphasised by Loukkola and Zhang (2010, p. 12), 'ideally higher education institutions are not merely working on their quality assurance processes, but developing internal quality cultures adapted to their own institutional realities, which is a much more challenging task than that of simply setting up processes required by external parties'.

This research seeks to examine academics' perceptions of the ESG. Specifically, it aims to understand how the ESG are being perceived by Portuguese academics, in terms of both importance and degree of implementation. Thus, our research aims to answer the following five questions:

- What is the level of awareness and knowledge of the ESG by academics?
- What importance do academics perceive that the ESG hold for the development of quality management practices in their universities?
- What do academics perceive to be the degree of implementation of the ESG in their universities?

- Is there a significant difference (a gap) between academics' perceptions of the importance of the ESG and the degree of implementation of the ESG in their universities?
- Are there different perceptions among different groups of academics, taking into account their research area, gender, sub-sector, academic degree, performance of management functions and level of involvement in quality management activities?

For the last research question, we assume academics' qualifications (whether they hold a doctorate), their research area, gender and the sub-sector they belong to (public or private universities) can influence their perceptions of the importance of the ESG and degree of implementation. This assumption is based on previous research on academics' perceptions of quality assurance (Cardoso et al., 2013; Veiga, Rosa, Dias, & Amaral, 2013). The literature shows that those academics performing management functions and involved in quality management activities tend to have a more optimistic view of such activities (Bell & Taylor, 2005; Rosa, Tavares, & Amaral, 2006; Stensaker, Langfeldt, Harvey, Huisman, & Westerheijden, 2011).

Data and methods

A questionnaire was devised taking into account the seven standards and the corresponding guidelines for internal quality assurance. The standards are: *ESG1 – policy and procedures for quality assurance*, referring to a commitment to the development of a quality culture; *ESG2 – approval, monitoring and periodic reviews of programmes and awards*, in respect of formal mechanisms and procedures; *ESG3 – assessment of students*, referring to 'published criteria, regulations and procedures consistently applied'; *ESG4 – quality assurance of teaching staff*, through the analysis of the teaching staff's competencies and quality; *ESG5 – learning resources and student support*, assuring that they are 'adequate and appropriate for each programme offered'; *ESG6 – information systems*, which should ensure the collection, analysis and use of 'relevant information for the effective management of their programmes of study and other activities'; and *ESG7 – public information* (ENQA, 2009).

One question inquired as to the respondent's knowledge of the ESG as a whole, while one or more questions (depending on the standard) focused on the academics' perceptions of each standard's importance for universities. A further set of questions for each standard then queried academics about its degree of implementation in their university. Academics gave answers on a scale of 1–7, where 7 represents the maximum level of knowledge, importance or degree of implementation, and 1 represents the minimum. Academics could also choose a 'don't know/no opinion' option.

We opted to use a census as the data collection strategy: the questionnaire was sent to all Portuguese universities, requesting that institutions disseminate it among their academic staff. A total of 1116 complete responses was gathered from universities (from a total population of 17,991). We weighted our cases according to four variables which characterise the entire population: gender, research area, sub-sector and academic degree, to make it more representative of the population. The weighted sample selected 1084 cases. Table 1 presents the sample characterisation.

The data collected were analysed using descriptive and inferential statistics. A paired sample *t*-test was performed to identify the existence of statistically significant differences between academics' perceptions of the importance of the ESG and the degree of implementation of the ESG in their universities. *T*-tests for independent samples,

Table 1. Sample characterisation.

		No. of academics	% of academics
Gender	Male	637	59.8
	Female	429	40.2
	Missing values	18	–
Sub-sector	Public	904	83.4
	Private	180	16.6
	Missing values	0	–
Research area	Natural sciences	206	19.4
	Engineering and technology	245	23.1
	Medical and health sciences	167	15.7
	Agriculture	29	2.7
	Social sciences	292	27.5
	Humanities	123	11.6
	Missing values	22	–
Performance of management functions	Management functions	455	42.2
	No management functions	623	57.8
	Missing values	6	–
Involvement in quality management practices	Low involvement	232	25.7
	High involvement	669	74.3
	Missing values	183	–
Academic degree	Doctorate	718	70.8
	No doctorate	296	29.2
	Missing values	70	–

one-way analysis of variance (ANOVA) and regression estimates were performed to assess whether there were statistically significant differences in the perceptions of different segments of academics, grouped according to the characterisation variables: gender, sub-sector, research area, performance of management functions, involvement in quality management activities and academic degree.

In order to synthesise the information collected and to focus the attention on a general overview of the importance and degree of implementation of the seven standards, the initial variables (the questions that constituted the questionnaire) which theoretically represent each ESG were aggregated into composite variables, and their means used as a replacement variable. This process resulted in seven variables related to the importance of each standard and seven variables corresponding to their degree of implementation (details of the survey questions are available in supplemental material online).

Results

Portuguese academics' knowledge of the ESG is presented in Table 2. We observe that 24.5% of academics placed themselves in the middle of the response scale. Moreover, 42.3% of academics know about the standards (answers of 5, 6 and 7 in the response scale). Of those that claim to know the standards, 10.5% indicated full knowledge of the ESG.

As Rosa and Amaral (2014, p. 164) concluded, awareness of quality assurance is rising, partially due to 'changes in the legal framework, some influenced by the

Table 2. Portuguese academics' knowledge of the ESG.

	1 – No knowledge	2	3	4	5	6	7 – Full knowledge	Mean	Median	Standard deviation
Knowledge of the ESG (%)	11.6	8.4	13.2	24.5	19.3	12.5	10.5	4.1	4.0	1.77

supranational level'. Nevertheless, it should not be forgotten that 11.6% of the academics claim to have no knowledge of the ESG. Academics' opinions tend to be positive towards the importance of each standard. On average, using the scale from 1 to 7, responses vary between 5.4 (ESG3 – assessment of students) and 6.7 (ESG7 – public information) (see Table 3). Academics perceive ESG2 and ESG3 to be the least important (median values of 6.0), which refer to the approval, monitoring and periodic reviews of programmes and awards (ESG2), and to the assessment of students (ESG3), respectively.

As shown in Table 3, perceptions of the implementation of the standards are also very positive, although median scores are lower than those obtained for the perceived importance of the standards. Median scores for the implementation vary between 5.2 (ESG4 – quality assurance of teaching staff) and 5.9 (ESG3 – student assessment). Moreover, while the median values for the perceived importance of the standards vary between 6 and 7, the median values for the perceived implementation of the standards are always lower than 6.

Overall, opinions are positive relating to both the importance of the ESG and the degree of implementation of the associated quality practices. The average level of agreement with the statements relating to the importance of each of the ESG to higher education, and to the existence in Portuguese universities of quality practices based on these standards and guidelines, is always higher than 5 (on a scale of 1–7). Nevertheless, the standards which were rated as having the lowest levels of importance are not the same standards as those with the lowest levels of implementation. As such, the importance the standards have for the academics does not seem to be reflected in a comparable degree of implementation in their universities.

Table 4 shows that there are statistically significant differences (p-values close to zero) between academics' perceptions of the importance of the ESG and their degree of implementation in universities. In other words, perceptions of the importance of the standards are statistically more positive than those related to their implementation, except for ESG3 (assessment of students). This means that, in general, academics consider that the standards are important, but the degree of implementation does not reflect their level of importance. The student assessment standard is, on average, the least important of the seven standards for the academics included in the sample (mean score of 5.4), although in their opinion, it is generally the most implemented standard in their universities (mean score of 5.7).

To further understand these trends, we also looked at how perceptions differ between different groups of academics. Table 5 shows that the perceived importance of the standards is generally similar for academics in different research areas, with the exception of ESG2 and ESG6. On the contrary, Table 6 shows that academics' perceptions of the

Table 3. Academics' perceptions of the importance and the implementation of the ESG.

	ESG1	ESG2	ESG3	ESG4	ESG5	ESG6	ESG7
Importance							
Mean	6.3	6.0	5.4	6.3	6.4	6.0	6.7
Standard deviation	.99	1.03	1.33	.66	.88	1.05	.58
Median	6.5	6.0	6.0	6.5	7	6.5	7
Implementation							
Mean	5.6	5.5	5.7	5.2	5.6	5.4	5.5
Standard deviation	1.16	1.17	1.13	1.26	1.07	1.23	1.12
Median	5.9	5.8	5.9	5.2	5.7	5.6	5.6

Table 4. Gaps between academics' perceptions of the importance of the ESG and of the degree of implementation (results of *t*-tests on paired samples).

Gap: implementation – importance	Mean	Standard deviation	*p*-value
Gap ESG1	−.6	1.42	.000
Gap ESG2	−.4	1.39	.000
Gap ESG3	0.2	1.56	.000
Gap ESG4	−1.1	1.37	.000
Gap ESG5	−.8	1.25	.000
Gap ESG6	−.6	1.34	.000
Gap ESG7	−1.3	1.17	.000

implementation generally differ significantly depending on their research area, with the exception of ESG2.

Tables 7 and 8 look at other determinants of differences between groups. Significant differences can be seen between the private and public sub-sectors for the importance attributed to four standards, while focusing on academics' perceptions of the implementation shows significant differences for all standards. In general, the academics from private universities are found to have a more positive opinion of the importance and the implementation of the standards.

Statistically significant differences are visible regarding gender for the importance of five standards and for the implementation of six standards. Women seem to have a slightly more positive view of the importance of four ESG and of the implementation of all the ESG (see Tables 7 and 8). In relation to the performance of management functions, we can only find statistically significant differences in academics' perceptions of the importance of ESG7 (public information). Academics without management functions attach more importance to it (see Table 7).

Table 5. Academics' perceptions of the importance of the ESG according to their research area (results of one-way ANOVAs).

		ESG1	ESG2	ESG3	ESG4	ESG5	ESG6	ESG7
Natural sciences	Mean	6.3	6.0	5.7	6.3	6.3	6.1	6.7
	Standard deviation	1.16	1.07	1.16	.63	.78	.97	.52
Engineering and technology	Mean	6.3	5.9	5.4	6.2	6.4	6.1	6.7
	Standard deviation	.81	.93	1.21	.69	.80	.84	.60
Medical and health sciences	Mean	6.2	6.1	5.6	6.4	6.2	5.3	6.9
	Standard deviation	.61	.49	1.06	.37	.66	1.23	.35
Agriculture	Mean	6.5	6.0	5.5	6.2	6.1	6.2	6.6
	Standard deviation	.81	.68	1.04	.51	1.23	.75	.78
Social sciences	Mean	6.3	6.1	5.3	6.3	6.4	6.2	6.7
	Standard deviation	.91	.99	1.31	.66	.80	.79	.56
Humanities	Mean	6.1	5.9	5.3	6.3	6.4	6.2	6.7
	Standard deviation	1.01	.97	.63	.79	.97	.86	.61
	p-value	.062	.001	.061	.126	.255	.000	.973

Table 6. Academics' perceptions of the degree of implementation of the ESG according to their research area (results of one-way ANOVAs).

		ESG1	ESG2	ESG3	ESG4	ESG5	ESG6	ESG7
Natural sciences	Mean	5.3	5.2	5.3	4.7	5.3	4.9	5.2
	Standard deviation	1.08	1.19	1.27	1.29	1.14	1.18	1.15
Engineering and technology	Mean	5.6	5.5	5.6	5.2	5.6	5.4	5.4
	Standard deviation	1.08	1.25	1.19	1.27	1.10	1.30	1.09
Medical and health sciences	Mean	5.7	5.7	5.9	5.1	5.5	5.0	5.0
	Standard deviation	.85	.87	.87	.97	.82	.94	.95
Agriculture	Mean	5.2	5.2	5.6	4.6	5.2	5.0	5.2
	Standard deviation	1.26	1.18	.99	1.36	.89	1.22	1.05
Social sciences	Mean	5.7	5.6	5.6	5.2	5.5	5.4	5.6
	Standard deviation	1.17	1.12	1.14	1.25	1.16	1.20	1.13
Humanities	Mean	5.5	5.4	5.5	5.0	5.3	5.5	5.5
	Standard deviation	1.29	1.19	1.17	1.30	1.19	1.35	1.15
	p-value	.003	.164	.006	.006	.000	.000	.010

Table 7. Determinants of academics' perceptions of the importance of the ESG (regression estimates).

		Sub-sector			Gender			Management functions		
		Public	Private	*p*-value	Female	Male	*p*-value	Without	With	*p*-value
ESG1	Mean	6.2	6.5	.005	6.3	6.2	.004	6.4	6.2	.398
	Standard deviation	.90	.80		.88	.88		.81	.95	
ESG2	Mean	6.0	6.2	.000	6.1	5.9	.001	6.1	5.9	.170
	Standard deviation	.91	.91		.87	.93		.77	1.01	
ESG3	Mean	5.5	5.5	.134	5.4	5.5	.020	5.5	5.4	.768
	Standard deviation	1.19	1.4		1.19	1.20		1.09	1.28	
ESG4	Mean	6.3	6.2	.958	6.3	6.3	.334	6.3	6.3	.075
	Standard deviation	.62	.68		.65	.62		.58	.68	
ESG5	Mean	6.3	6.6	.002	6.4	6.3	.002	6.4	6.3	.155
	Standard deviation	.84	.71		.81	.83		.71	.92	
ESG6	Mean	5.9	6.4	.000	6.2	5.9	.001	6.0	6.0	.434
	Standard deviation	1.02	.81		.75	1.07		1.21	.88	
ESG7	Mean	6.8	6.8	.560	6.8	6.8	.580	6.9	6.7	.001
	Standard deviation	.56	.62		.55	.58		.43	.66	

Table 9 looks at whether the academic degree has a significant effect on perceptions. Statistically significant differences are visible in all but one case, covering perceptions of importance and perceptions of implementation. The exception here is perceptions of the importance of ESG4 (quality assurance of academic staff). We also observe that, in general, academics with a doctorate tend to have a weaker perception of both the importance and the degree of implementation of the standards.

Table 8. Determinants of academics' perceptions of the implementation of the ESG (regression estimates).

		Sub-sector			Gender			Management functions		
		Public	Private	*p*-value	Female	Male	*p*-value	Without	With	*p*-value
ESG1	Mean	5.5	6.0	.000	5.6	5.5	.215	5.6	5.5	.382
	Standard deviation	1.15	1.16		1.04	1.21		1.05	1.24	
ESG2	Mean	5.4	6.0	.000	5.5	5.4	.005	5.5	5.4	.386
	Standard deviation	1.12	1.14		.98	1.21		1.04	1.21	
ESG3	Mean	5.4	6.1	.000	5.6	5.5	.010	5.7	5.5	.223
	Standard deviation	1.14	1.07		1.04	1.20		1.02	1.54	
ESG4	Mean	4.9	5.8	.000	5.1	5.0	.015	5.0	5.0	.417
	Standard deviation	1.24	1.20		1.20	1.29		1.11	1.38	
ESG5	Mean	5.3	6.0	.000	5.5	5.4	.033	5.6	5.3	.113
	Standard deviation	1.05	1.14		1.03	1.10		.92	1.18	
ESG6	Mean	5.1	5.9	.000	5.4	5.2	.001	5.3	5.2	.452
	Standard deviation	1.16	1.28		1.10	1.24		1.08	1.30	
ESG7	Mean	5.3	5.8	.000	5.6	5.2	.000	5.4	5.4	.301
	Standard deviation	1.09	1.05		.97	1.15		1.01	1.19	

Table 10 further explores how the involvement of academics in quality management activities influences their perceptions of the importance and degree of implementation of the standards. The data suggest that the differences regarding importance are statistically significant only regarding ESG3 (student assessment). For this standard, the perceptions of academics with high involvement in quality management activities are slightly higher than the perceptions of academics with low involvement. Regarding academics' perceptions of the implementation of the standards, we observe that there are statistically significant differences for five standards. For these five cases, the perceptions of academics with high levels of involvement in quality management activities are more positive than the perceptions of academics with low levels of involvement, as we initially hypothesised.

Thus, the perceptions of the importance and the implementation of the standards vary among different groups of academics. Indeed, academics with different disciplinary affiliations tend to have different perceptions of the implementation of the standards. Academics from private universities have more positive opinions of the standards than academics from the public sector. Moreover, women seem to consider the standards more important and more implemented than men. Academics with a doctorate consider the standards less important and less implemented than academics without a doctorate. Finally, the perceptions of academics with high levels of involvement in quality management activities are slightly more positive than the perceptions of academics with low levels of involvement.

Discussion

Several European countries, including Portugal, have followed a trend in recent years whereby universities have designed and implemented internal quality assurance systems. Among other factors, this trend can be seen as a consequence of the Bologna process and the development of the Standards and Guidelines for Quality Assurance in the European Higher Education Area. In this study, Portuguese academics have been found

Table 9. Academics' perceptions of the importance and degree of implementation of the ESG according to their degree (results of *t*-tests for independent samples).

		Mean		Standard deviation		*p*-value	
		Importance	Implementation	Importance	Implementation	Importance	Implementation
ESG 1	No doctorate	6.5	5.9	.68	.92	.000	.000
	Doctorate	6.2	5.4	1.10	1.24		
ESG 2	No doctorate	6.3	5.8	.88	.98	.000	.000
	Doctorate	5.9	5.3	1.10	1.23		
ESG 3	No doctorate	5.4	5.9	1.25	1.02	.029	.000
	Doctorate	5.4	5.4	1.40	1.17		
ESG 4	No doctorate	6.3	5.6	.60	1.12	.087	.000
	Doctorate	6.3	4.9	.68	1.30		
ESG 5	No doctorate	6.5	5.8	.89	.99	.004	.000
	Doctorate	6.3	5.2	.90	1.11		
ESG 6	No doctorate	6.4	5.8	.78	1.08	.000	.000
	Doctorate	6.1	5.2	.93	1.26		
ESG 7	No doctorate	6.8	5.7	.45	.96	.010	.000
	Doctorate	6.7	5.4	.61	1.16		

Table 10. Academics' perceptions of the importance and degree of implementation of the ESG according to their involvement in quality management activities (results of *t*-tests for independent samples).

		Mean		Standard deviation		*p*-value	
		Importance	Implementation	Importance	Implementation	Importance	Implementation
ESG1	Low involvement	6.2	5.1	1.06	1.38	.716	.014
	High involvement	6.3	5.7	.95	1.05		
ESG2	Low involvement	5.9	5.1	1.07	1.38	.168	.001
	High involvement	6.1	5.6	.94	1.05		
ESG3	Low involvement	5.2	5.1	1.45	1.24	.004	.006
	High involvement	5.6	5.7	1.27	1.05		
ESG4	Low involvement	6.3	4.7	.61	1.50	.831	.004
	High involvement	6.3	5.2	.62	1.14		
ESG5	Low involvement	6.3	5.2	.99	1.22	.337	.019
	High involvement	6.3	5.6	.83	.98		
ESG6	Low involvement	6.0	5.0	.86	1.41	.215	.421
	High involvement	6.0	5.3	1.01	1.15		
ESG7	Low involvement	6.8	5.2	.50	1.27	.265	.604
	High involvement	6.8	5.5	.52	1.03		

to have positively 'welcomed' the ESG, reinforcing the results of other recent studies (Cardoso et al., 2013; Rosa et al., 2012), and somehow contradicting the picture of academics as showing resistance and scepticism to quality management models (Harvey, 2006; Newton, 2002).

The positive perceptions of the importance and the degree of implementation of the standards and guidelines can be related to the European as well as the Portuguese legal frameworks, and the work of the A3ES, which act as facilitators in the implementation of quality assurance policy procedures (Rosa & Amaral, 2014; Sarrico et al., 2013a). Thus, in general, academics consider the different European standards and guidelines important for both higher education and their universities, and believe that their universities implement the ESG to a certain extent.

Another plausible explanation for the fairly positive general results may be that the academics who answered the questionnaire are those who know, or at least are interested in, quality management and quality management practices in their universities. Academics who are less committed to the quality agenda may be underrepresented among the respondents to the questionnaire. Although we can assure the representativeness of the sample considering some characteristics of the population, namely gender, research area, sub-sector and academic degree, we cannot know who these academics are regarding their level of commitment to the issue of quality. We do note that almost three-quarters of the respondents report a high level of involvement in quality management practices (see Table 1), which is probably higher than for the population as a whole.

Still, there are differences between the knowledge of the standards, the perceptions of their importance, and the perceptions of their implementation. Knowledge of the standards is lower than perceptions of their implementation, and these perceptions are lower than the perceptions of their importance. Even so, this situation represents a favourable environment for the development of internal quality management systems in Portuguese universities since an implicit acceptance of the standards is more relevant than explicit knowledge of them (Sarrico, Veiga, & Amaral, 2013b).

Hence, academics consider the standards important, but also consider that the level of implementation in the universities is not comparable. The exception is ESG3, covering student assessment, which is the only ESG where the perceptions of its implementation are higher than the perceptions of its importance. Contrasting this with the results of Sarrico and Rosa (2014, p. 172), which show that 'students' expectations about … [different] aspects of the quality of their academic experience are significantly higher than the perceptions of the quality of service actually received', we believe that the results for ESG3 would possibly be different if we were analysing the perceptions of the students, rather than academics.

In this sense, there are gaps between what academics perceived as important for quality management activities considered in the standards and what is actually being implemented in their universities. As the literature has been showing, the implementation of quality management practices – and of ESG in particular – is a problematic and complex process in universities (Loukkola & Zhang, 2010; Motova & Pykkö, 2012; Rosa & Amaral, 2014; Westerheijden & Kohoutek, 2014). Furthermore, there does not seem to be a relation between the importance academics place on standards and the degree to which they perceived them to be implemented in their own universities.

We assessed a number of variables for their influence on academics' perceptions, and concluded that variables such as gender, academic degree, sub-sector and scientific area seem to play an important role in explaining the differences in the perceptions of

academics. Concerning gender, our research is in line with other studies on the perceptions of quality in higher education (Cardoso et al., 2013), showing that women have a more positive view of quality management. These results can have different explanations. Assuming that the essence of quality is linked with caring, and that women are socially more related with caring roles, they are, consequently, more committed to quality activities (Luke, 1997; Morley, 2005). Moreover, quality may be regarded by women as a means of power, equitable participation, inclusion and enhancement (Luke, 1997; Morley, 2005).

Our research also shows that academics without a doctorate have more positive perceptions. We provide two possible explanations: (a) younger academics without a doctorate are probably in the process of obtaining one; they are likely to find quality management practices more socially acceptable than older, more established academics, and consequently perceive those practices as beneficial; and (b) older academics without a doctorate are mainly engaged in teaching rather than research, being more receptive to and also more involved in practices related to the quality improvement of teaching, which is mostly what the ESG are about.

Academics from private universities have a more positive perception of quality management. This may be related to the need for private universities to achieve recognition, credibility and reputation, which public universities traditionally already have.

Academics from different scientific areas tend to have different perceptions of the importance and the implementation of the standards, as previous studies of academics' perceptions of quality assurance also show (Cardoso et al., 2013). Disciplinary affiliation tends to influence academics' perceptions and practices, constituting the framework in which academics' social practices, values and attitudes can be found and explained (Becher & Trowler, 2001; Clark, 1986).

Surprisingly, variables which we initially believed to be the most influential, namely experience of management roles and involvement in quality management activities, were less significant – a comparable result to the findings of other studies (Cardoso et al., 2013; Veiga et al., 2013). In particular, academics without management functions attached more importance to ESG7 (related to public information) than those with management functions. A possible explanation may be that people without management functions feel more of a need to be informed about what is actually happening in their institutions, considering that the university should more regularly publish impartial and objective information about its activities.

Academics with high levels of involvement in quality management activities had more positive perceptions of the standards (where the differences were statistically significant). This lends credence to the view that 'experience in quality assurance may contribute to more optimistic views of it' (Cardoso et al., 2013, p. 109).

Results reported in this paper suggest a general scenario describing academics' perceptions of the ESG. This allows us to understand how academics are reacting to the practices that are established in the standards, and if they perceive their universities to be implementing those practices. The results may be important for practitioners developing and implementing quality management policies and practices in universities, and may also give some clues as to which standards need more effort to improve their implementation in universities. Based on our results, the standard which has the lowest levels of implementation appears to be ESG4 (teaching staff), while both ESG4 and ESG7 (public information) have the largest gaps between academics' perceptions of implementation and importance, indicating the lowest level of consistency between what is perceived as being most important and what is perceived as being most implemented.

Moreover, the results depict some of the variables that can influence such perceptions, which are possession of a doctorate, higher education sub-sector, research area, gender and involvement in quality management activities. These types of results may be useful for those responsible for defining and developing quality management (both at a system and at an institutional level). For example, they may wish to consider working towards improving the perceptions of certain groups of academics, as this may help counter unsupportive, or even more resistant, attitudes, encouraging academics' engagement with quality management.

There are some pitfalls, however. This research is limited in its ability to identify the deep-seated motivations and explanations for the reported perspectives. It would also benefit from a deeper understanding of the manner in which quality practices – influenced by the European and national models – are being implemented in Portuguese universities. Furthermore, it would be interesting to understand to what extent implementation of the quality practices embedded in the ESG is due to the ESG themselves, or if such practices were already in place in universities. Future questionnaires may benefit from some open questions, where academics can comment and give a more detailed opinion about particular topics.

It would also be interesting to use a qualitative approach to explore these and other questions related to the implementation of quality management practices in universities. Such an approach would allow for an in-depth exploration of the perceptions, the motivations and the resistance behind them, providing a more substantiated portrait of the quality management practices and the level of influence that the European and national quality models have on the quality practices of the universities. Moreover, and considering the above-mentioned limitation related to the representativeness of the sample, the qualitative approach should embrace different types of academics with different involvement levels in internal quality management systems, and with different hierarchical positions in the organisational structure. At the same time, other internal stakeholders, such as students and non-teaching staff, should be heard, helping to complete our insight into the awareness, the importance and the implementation of the ESG and of the quality management practices, in universities. That is what we intend to do as further research.

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Supplemental data

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Supplementary material: Original variables and new composite variables

Original variables (questions)	**Composite variables**
It is important that HEIs have formal procedures for the quality assurance of their programmes and awards.	Importance ESG1
Formal policies and procedures for quality assurance provide public confidence in institutional autonomy.	
HEIs should have formal mechanisms for the approval, periodic review and monitoring of their programmes and awards.	Importance ESG2
The confidence of students and other stakeholders in HE is more likely to be established and maintained through effective quality assurance activities.	
The assessment of students is one of the most important elements of HE.	Importance ESG3
It is important that teachers have a full knowledge and understanding of the subject they are teaching.	Importance ESG4
Teachers are the single most important learning resource available to most students.	
Students rely not only on teachers but also on a range of resources to assist their learning.	Importance ESG5
Institutional self-knowledge is the starting point for effective quality assurance.	Importance ESG6
It is important that HEIs have the means of collecting and analysing information about their own activities.	
HEIs have a responsibility to provide information about the programmes they are offering.	Importance ESG7
The quality assurance policy of the institution contains the statements of intentions and the principal means by which these will be achieved.	Implementation ESG1
The strategy, policy and procedures for quality assurance of the institution have a formal status and are publicly available.	
There is procedural guidance which gives detailed information about the ways in which the policy is implemented.	
The institution has a policy and associated procedures for the assurance of the quality and standards of their programmes and awards.	
The institution develops and implements a strategy for the continuous enhancement of quality.	
The strategy, policy and procedures include a role for all the stakeholders: teachers, students, non-teaching staff, employers, professional associations, etc.	
The policy statement for quality assurance includes:	
-the relationship between teaching and research in the institution	
-the institution's strategy for quality and standards	
-the organisation of the quality assurance system	
-the responsibilities of departments, schools, faculties and other organisational units and individuals for the assurance of quality	
-the involvement of students in quality assurance	
-the ways in which the policy is implemented, monitored and revised	
The institution has formal mechanisms for the approval of their programmes and awards.	Implementation ESG2
The institution has formal mechanisms for periodic review and monitoring of its programmes and awards.	
Quality assurance activities ensure that programmes are well-designed, regularly monitored and periodically reviewed, thereby securing their continuing relevance and currency.	

The quality assurance of programmes and awards includes: -development and publication of explicit intended learning outcomes -careful attention to curriculum and programme design and content -specific needs of different modes of delivery (e.g. full-time, part-time, distance-learning, e-learning) -formal programme approval procedures by a body other than that teaching the programme -monitoring of the progress and achievements of students -regular periodic reviews of programmes, including external panel members -regular feedback from employers, labour market representatives and other relevant organisations	
Students are clearly informed about the assessment strategy being used for their programme, what will be expected of them and the criteria that will be applied to the assessment of their performance. Students are clearly informed about what examinations or other assessment methods they will be subjected to. The assessment of students is carried out professionally and takes into account the extensive knowledge that exists about testing and examination processes. Students are assessed using published criteria, regulations and procedures which are applied consistently. Student assessment procedures: -are designed to measure the achievement of the intended learning outcomes and other programme objectives -are appropriate for their purpose, whether diagnostic, formative or summative -have clear and published criteria for marking -are undertaken by people who understand the role of assessment in the progression of students towards the achievement of the knowledge and skills associated with their intended qualification -do not rely on the judgements of a single examiner -ensure that assessments are conducted securely in accordance with the institution's stated procedures -are subject to administrative verification checks to ensure the accuracy of the procedures	Implementation ESG3
The mechanisms which ensure teachers' qualifications and competencies are discussed in internal reports for the quality assurance of the institution. Teaching staff are encouraged to value their skills. The institution has the means to remove teachers from their teaching duties if they continue to be demonstrably ineffective. The institution has ways of satisfying itself that staff involved in teaching activities are qualified and competent to do so. The institution provides poor teachers with opportunities to improve their skills to an acceptable level. Teachers can access feedback on their own performance. The institution ensures that their staff recruitment and appointment procedures include means of making certain that all new staff have at least the minimum necessary level of competence. Teachers have the necessary skills and experience to transmit their knowledge and understanding effectively to students.	Implementation ESG4
Learning resources and other support mechanisms are readily accessible to students. Learning resources and other support mechanisms take into consideration the needs and the feedback from the students.	Implementation ESG5

The institution ensures that the resources available for the support of student learning are adequate and appropriate for each programme offered.	
The institution routinely monitors and reviews the support services available to its students.	
The institution has human resources such as tutors, counsellors and other advisors to support student learning.	
The institution has physical resources such as libraries or computing facilities to support student learning.	
The institution routinely improves the effectiveness of the support services available to its students.	
The institution compares itself with other similar organisations in the European higher education area and beyond.	
The institution collects and analyses relevant information for the effective management of its programmes of study and other activities.	
Based on the collected information, the institution knows what is working well and what needs attention, and the results of innovative practice.	
The comparison with similar institutions allows the institution to extend the range of its self-knowledge and to access possible ways of improving its own performance.	
The quality-related information systems of the institution cover:	Implementation ESG6
-student progression and success rates	
-employability of graduates	
-students' satisfaction with their programmes	
-effectiveness of teachers	
-profile of the student population	
-learning resources available and their costs	
-the institutions' own key performance indicators	
The institution publishes information about the views and employment destinations of past students.	
The institution publishes information about the profile of the current student population.	
The institution publishes information about the intended learning outcomes.	Implementation ESG7
The institution publishes information about the qualifications they award and the learning opportunities available to its students.	
The public information is not used simply as a marketing opportunity.	
The public information is accurate, impartial, objective and readily accessible.	

3.4. Manatos, M., Sarrico, C. S., & Rosa, M. (2017). Quality management in universities: towards an integrated approach? (forthcoming). International Journal of Quality and Reliability Management.

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Quality management in universities: towards an integrated approach?

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Abstract:	

Quality management in universities: towards an integrated approach?

Abstract

Purpose - The research presented in this paper aims to empirically test the thesis that universities are developing their different quality management (QM) systems comprehensively and integrating them in their broader management and governance systems, covering different processes, organisational levels and the principles of QM.

Design/ methodology/ approach – The empirical work is based on a country case study which embeds three paradigmatic university case studies. Data is obtained from institutional documents, as well as from individual and panel interviews. A content analysis using N-Vivo was undertaken.

Findings – Universities show signs of integrating quality management in their overall management and governance framework. They develop their QM systems with a focus on teaching and learning, but they are increasingly trying to integrate their other processes. They seek to involve their different organisational levels, from the programme to the institutional level. Universities cover most QM principles, but show deficiencies regarding customer focus, mutually beneficial supplier relationships, involvement of people, and process and system approach.

Research limitations – Our research shows the results of three paradigmatic cases regarding QM implementation, since these were the first to have their QM systems certified by the Agency for Assessment and Accreditation of Higher Education (A3ES). In future work, it would be interesting to understand how other universities are developing their QM systems and whether implementation occurs in an integrated way.

Practical implications – We expect that our results will add to the discussion on the implementation of QM in universities, further contributing to the development of truly integrated approaches to QM in higher education.

Originality/ value – The article discusses the QM systems which are being developed and implemented in universities and analyses how integrated they are, as only those that are fully integrated will contribute to improve the overall quality of universities.

Keywords: Quality management, integration, universities, multiple case study

Article Classification: Research article

Introduction

A more integrative vision of QM in higher education is visible in the literature, emphasising the development of total and holistic approaches to QM (Manatos et al., 2015).

Likewise, universities show signs of increased integration in their QM systems, following the path shown in the literature (Srikanthan and Dalrymple, 2002, Srikanthan and Dalrymple, 2007, Manatos et al., 2015). Integration is understood as the development of QM methods within organisations covering different processes, organisational levels, QM principles, and being part of the organisational overall management framework (Manatos et al., 2015).

The conceptual work presented in Manatos et al. (2015) clearly highlights the trend in the literature towards the integration of QM in higher education. To better understand that process, we present here an empirical study using Portuguese universities. In developing the study, we focused on several aspects of the QM system in the organisation. We investigate whether the QM systems of universities approach their different processes in an integrated way, i.e., whether there are articulated policies, goals, strategies and practices for teaching and learning, research and scholarship, third mission and support processes, or whether they are fragmented (Barnett, 1990). We study whether the QM systems help integrate the different organisational levels, i.e. whether the programmes, the basic units and the institution as a whole are called to participate and are involved in QM (Brennan and Shah, 2000). Finally, we examine whether universities integrate the different QM principles into their QM systems: customer focus, leadership, involvement of people, process approach, system approach, continuous improvement, factual approach to decision making and mutually beneficial supplier relationships (ISO, 2012).

From a different perspective, we aim to understand to what extent the broader management framework of the universities integrates QM. In particular, the goal is to understand whether: (i) QM is part of the strategy of the universities; (ii) QM is a delegated area of responsibility for the management and governance bodies of universities (iii) the results from QM inform the universities' strategic management.

We use a country case study with three embedded paradigmatic cases of universities that have their internal QM systems certified by the Agency for Assessment and Accreditation of Higher Education in Portugal (A3ES). We believe that it is interesting to understand how the universities with more advanced implementations of internal QM systems behave regarding the integration of those systems. In assessing integration, we consider their main processes and mission, their different organisational levels, the QM principles, as well as the integration of the QM system in their overall management and governance systems.

Altogether, we aim to understand to what extent universities are developing and implementing integrated QM systems, since we believe that only an integrated approach to QM in higher education can actually contribute to improving the quality of universities and their processes (Sun, 2000, Cruickshank, 2003).

The integration of quality management in universities

Traditionally, universities are fragmented and loosely coupled organisations. This reflects their disjointed internal and external environment, and the existence of dispersed stimuli or the incompatible expectations they are subject to (Cohen et al., 1972, Weick, 1976, Orton and Weick, 1990, Deem, 1998, Frølich et al., 2013).

However, there are indications that universities are more and more interested in integrating their main processes and consequently their management practices (Manatos et al., 2015).

There are signs that the management and governance framework of universities are becoming increasingly integrated, leading to the centralisation of power in a small number of decision-making and governance bodies (Melo et al., 2010). Often, executive bodies have shrunk in an attempt to become more agile, while collegial bodies have been losing deliberative powers and become merely consultative bodies to the executive centralised decision-making power (Sarrico et al., 2013b, Shattock, 2003, Shattock, 2006).

The trend towards integrative approaches in higher education has been partially translated into the development of European QM frameworks, national accreditation and assessment systems, and internal QM systems in universities (Rosa et al., 2001, Srikanthan and Dalrymple, 2002, Srikanthan and Dalrymple, 2007, Rodman et al., 2013). The European QM models, namely the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), have increasingly been paying attention to the role of QM in supporting and driving institutional strategic management (ENQA, 2015).

As the European University Association (2010) highlights: "institutional QM requires a comprehensive, all-encompassing approach". This covers all the processes of the universities, the different organisational levels and the QM principles, but also assumes the integration of QM in the broader management and governance framework of universities. This need for integration is actually highlighted by several authors, who emphasise the need to link QM to institutional strategic management (Gover et al., 2015) and to weave QM initiatives into the strategic plan of institutions (Horine and Hailey, 1995, Cruickshank, 2003, Bender and Siller, 2006).

Setting up quality management systems

Different developments at the European, national and institutional levels have influenced the emergence of internal QM systems.

The Bologna Process and the establishment of the European Higher Education Area is closely linked to the development of QM in European universities. At the same time they have been encouraging the quality debate in Europe and attempting to create a common understanding of the principles and procedures associated with internal and external quality assurance (Kohoutek and Westerheijden, 2014, Veiga and Sarrico, 2014, ENQA, 2009). In this context, the ESG (for internal quality assurance), developed in response to the demands of the Berlin Communiqué (2003), were crucial to the promotion and the development of internal QM systems in universities (ENQA, 2009).

Consequently, the European higher education quality landscape has evolved quite rapidly, and by 2010 almost all European universities had implemented some form of national quality assurance procedures (Kohoutek and Westerheijden, 2014).

At the national level, the national accreditation agencies have also played a role in this process. Some of the accreditation agencies affiliated with the European Association for Quality Assurance (ENQA), such as the ones in Portugal, Spain, Finland, Norway and Austria have already started to audit, certify or accredit the internal QM systems of universities, based on compliance with the ESG. Despite not being a common practice to all the countries of the European higher education area, it seems to be growing. In the ENQA 2012 survey, 34% of the national agencies identified the introduction of QM procedures focused on the institution as a whole as a central change to be introduced in the future (Gover et al., 2015, Grifoll et al., 2012). In fact, developing periodic assessments of all study programmes in one country is costly and can cause significant disruption to the normal activities of the institutions. These are possible reasons for countries to choose to assess institutions and/or their internal QM system.

In Portugal, alongside its assessment and accreditation activities of study programmes, A3ES promotes the implementation and certification of institutional QM systems (A3ES, 2013a). In 2011, A3ES adopted a model for auditing QM systems with a view to their certification. It includes eight main dimensions: (1) the institutional policy for quality; (2) the effectiveness of the procedures and structures for quality assurance; (3) the relationship between the quality assurance system and the governance and management bodies of the institution; (4) the participation of internal and external stakeholders in the quality assurance process; (5) the information system; (6) the publication of information relevant to external stakeholders; (7) the monitoring, evaluation and continuous improvement of the QM system;

and (8) the QM system taken as a whole (A3ES, 2013b). A3ES aims to provide guidelines to assist institutions in the design and development of their internal QM systems according to the profile and specific requirements of each institution (A3ES, 2013a).

By promoting the certification of QM systems in compliance with the European demands, A3ES favours not only the implementation of quality management practices but also makes universities more aware of internationalisation and of the European exigencies (Rosa and Amaral, 2014, Rosa and Sarrico, 2012).

Despite the decisive role and influence of the European and the national contexts, the responsibility for developing QM systems and practices lies ultimately with the universities, as stated in the Berlin Communiqué (2003). The institutional level, i.e. the university, has a preponderant influence on the way the internal QM systems are being set up. On the one hand, universities (mainly through their management and governance bodies) have the autonomy and the power to design their own internal QM systems. On the other hand, universities are strongly influenced by European and national regulatory entities, tending to closely follow their standards and guidelines, ultimately because they need the certification or accreditation of their QM systems (Cardoso et al., 2015).

Methodology

A country case study was undertaken, which includes three embedded university case studies. Universities A, B and C (designated as UA, UB and UC below) were the first universities in Portugal with an internal QM system certified by A3ES (in 2013, for a period of 6 years). These cases can be defined as paradigmatic (Flyvbjerg, 2006) or extreme cases (Gerring, 2007). We believe that it is interesting to explore the QM systems and their level of integration of the universities that should have the most developed QM systems, since they were the first ones to have their QM systems certified.

The university case studies are all different in terms of size and location. This choice ensures a diversified sample, able to empirically base the research. To further diversify the study, the contrasting study areas of Engineering, Language and Literature, and Education were investigated in the different institutions.

First, we analysed the content of official documents of the universities, such as their statutes, strategic plans, quality manuals, quality plans, activity reports, and audit reports from A3ES. Then, we have conducted semi-structured interviews with different internal stakeholders. We interviewed academics with different involvement levels in the internal QM systems and with different hierarchical positions in the organisational structure, from top managers responsible for the development of the QM policy, to academics without

management functions, who have to deal with QM on a daily basis. We also interviewed other internal stakeholders, such as non-academics involved in QM activities, and students.

Academics without management functions and students were interviewed in panels of 3 to 5 elements. In total, 23 individual interviews and 9 panel interviews were conducted (see the list of interviewees in Appendix 1).

We have drawn on an interview script with several open questions around five main topics. Each topic encompasses different dimensions: i) quality in higher education, including the strategies, goals and drivers of QM; and the different levels where we look for integration in: ii) processes, iii) organisational levels, iv) QM principles; and finally v) QM as part of the broader management and governance framework of the university. The data collected was subject to content analysis and categorised into the different levels and dimensions of the grid displayed in Table 1, using the NVivo software for qualitative data analysis.

Table 1. Content analysis grid

Levels of analysis	Dimensions
Quality in higher education	Strategy and goals for quality Drivers for quality
Processes level	Teaching and learning Research and scholarship Third mission Support processes
Organisational level	Programme Basic unit Institution
Quality management principles level	Customer focus Leadership Involvement of people Process approach System approach Continuous improvement Factual approach Mutually beneficial supplier relationships
QM as part of the overall management and governance of the university	QM as part of the university strategy QM as an area of responsibility of the management and governance bodies of the university QM as a tool for strategic management

Our research is thus based on the analysis of the official documents regarding QM, but mostly on the perceptions from the different internal stakeholders.

Since the QM system from the three universities were certified by A3ES, and the reports from the external auditing by A3ES are publicly available, we also analyse our results in light of those reports.

The development and the implementation of QM systems in universities

Processes in higher education: the focus on teaching and learning

Teaching and learning

The three universities illustrate the specific attention that is being paid to teaching and learning.

The QM of teaching and learning is similar in the three universities. Teaching and learning activities are assessed mainly through: surveys to students about the performance of academic staff and their courses; reports developed by academics individually, about their courses; reports developed by programme directors about their programmes; reports developed by unit directors, about their units; and analysis by institutional bodies, such as pedagogic and scientific councils, regarding the courses, the programmes, the department, and the schools (in the cases of institutions B and C).

Teaching and learning assessment consists essentially of nested reports produced by different organisational levels, where each level of analysis reflects on the improvement actions proposed by the previous level. The importance of these reports, as self-analytical tools and crucial elements of the QM system produced by the different levels in the academic hierarchy (from individual academics to the pedagogic councils), is also highlighted in the A3ES auditing reports.

Universities also have strategies to identify the worst results and to highlight and promote best practice. In UA and UB, auditing is used to understand the problems of certain courses. Similarly, in both universities, *"the system automatically signals the situations which do not follow some criteria (linked with the goals established for the programme). And when that happens, no report can be submitted without some justification, and, if necessary, improvement and correction measures are asked for"* (Responsible for quality at the rectory level, UB).

In UC, *"if the performance results obtained via questionnaires to students are lower than a certain value, the academic being evaluated has to make a report covering the aspects that were highlighted as negative and, globally, discussing his/her performance and his/her course"* (Academic from the programme of Education, UC).

Good practices are also recognised. When academics at UA receive an excellent evaluation they are given an award in a public ceremony in the university. UB develops a *"portfolio that highlights best practices"* (Responsible for Quality at Rectory).

The main limitation in this process is the exclusion, until now, of the 3rd cycle (doctorate degrees). However, UA is already developing *"a pilot experiment in the 3rd cycle, especially in the more traditional classes (theoretical classes, practical classes, laboratory classes). Thesis and other 'evaluation' forms are being subject to pilot experiments, since last year"* (Coordinator of the operational body for studies and planning, UA). Similarly, UB foresees *"the integration of the doctoral programmes in the current year"* (Responsible for quality at the rectory, UB). In this regard, UC lags behind the others.

Research and scholarship

With research and scholarship, all universities recognise that the assessment of research and of the research centres has been mainly developed by external entities and according to assessment methods and tools developed by the Portuguese Foundation for Science and Technology (FCT). However, more recently the QM systems started to integrate the research process. In UA, *"these days the evaluation of the research is based on the strategic planning of the R&D units (...) and we internally develop the evaluation of researchers and research centres"* (Coordinator of the operational body for studies and planning). In UB, *"the self-evaluation reports from the research units are introduced in the system, where they are processed and then analysed and commented by those directly responsible"* (Administrator, UB), and *"the participation rates are close to 100% (...) there is a great involvement of the researchers"* (Responsible for quality at the rectory).

However, especially in UC, the integration of research in the QM systems is not yet entirely consolidated: *"we are now creating working groups (...) involving people from the rectory and people from the research centres (...) in order to identify the priorities regarding the identification and implementation of mechanisms in terms of research"* (Responsible for quality at the rectory).

Third mission

The third mission reflects the engagement of universities in business-related activities, local and regional development, economic growth and societal development in general (Laredo, 2007).

UA has been *"developing regulations, related to the relationships with companies, namely to the internships of the students in the companies, and mechanisms to assess those relationships. And we have the Technology Transfer Office and specific groups (one of them is connected to intellectual property)"* (Coordinator of the operational body for studies and planning).

In UB, there are also bodies who assess this process, as with the *"cooperation with society units [which] have to produce a self-evaluation report, which is then submitted to the council"*

(Coordinator of the operational body for quality). *"It is one of the strengths of the university, and the university is betting on an increase in the relationships with external partners"* (Academic from the Language and Literature programme, UB).

There are some signs of the third mission becoming integrated in the QM systems of the universities, especially in UA and UB. Some of the interviewees mention relationships that the universities establish with several external entities, but they do not know how these activities are assessed or monitored: *"there are very strong relationships (...) with local institutions (...) city structures (...) companies (...) but I don't know if those relationships with the community are covered by the system"* (Director of the programme of Education, UC).

Support processes

The support processes cover all sorts of services and processes, ranging from administrative, accommodation, estates, sports, cultural and other services (Yeo and Li, 2014). The level of integration of these processes in the QM system varies in the three universities.

In UB, the QM system already has mechanisms that integrate the support processes. The top managers of UB explain how: *"services have a strategic plan and an annual activity plan, and at the end of each year they must develop an activity report"* (Responsible for quality at the rectory). The system *"registers the activities that were developed, comparing them with the activities that were planned, in order to gauge the level of compliance"* (Administrator).

In 2011, UA developed a pilot experiment based on customer satisfaction surveys for different services: *"For now, it is an experiment in some services, such as human resources, financial services and the postgraduate area"* (President of the strategic body for quality). In UC, *"this is an area which needed intervention, update and reorganisation. (...) We are in the process of certifying all the services where there is a close relationship with the student. We will then continue with the implementation of similar strategies covering the internal relationship between the services and the academics"* (Responsible for quality at the rectory).

However, most of the interviewees, who are not involved in the development of the QM system, do not know whether services are included in the QM system, and whether they are subject to some kind of assessment. When questioned about it, the answer is frequently: *"As far as I know, they are not integrated"* or *"I don't know!"* (Panel of academics from the programme of Informatics Engineering, UC). However, some academics and students highlight satisfaction surveys regarding particular services: *"students are asked to express their opinion about the services they use (equipment, materials, and facilities), through satisfaction surveys, including customer service"* (President of the student union, UB).

Organisational level: from the course to the institution

The different organisational levels (the course, the programme, the department and the institution) seem to be connected, mainly through the teaching and learning process. As we observed above, the different roles for the different organisational levels with regard to the assessment of course and programmes are well defined, and the different stakeholders seem to know their role in the process.

As this may be, the relationships between the institutional level and the lower levels are sometimes more difficult, and the articulation is not always effective, mainly in UC, but also in UB. The Director of the programme of Education in UC states: *"it would be beneficial if the university encouraged more engagement between the rectory (for quality) and the professors"*. Likewise, the Vice-Director of the programme of Language and Literature in UB considers that there should be *"proximity between the different bodies and the people involved in these processes"*.

Quality management principles: a limited integration

Customer focus

Customer focus means the concern of universities with identifying the needs of their main customers and meeting and even exceeding their expectations.

The three institutions assert their focus on students. Their main customers are the students and the universities clearly state that they seek to respond to their expectations and needs. As the responsible for quality at the rectory in UC mentions: *"the focus of our activity is the student, who is, simultaneously our customer (in the sense that this is a public service, of education, of teaching) and our product."*

Nevertheless, other customers are also highlighted, mainly by the academics with management functions and/or involved in QM activities: *"the students are the main customers, since teaching is the main product of the university. However, there are other important stakeholders with whom the university works: the alumni, other institutions, and the society in general"* (President, UA). The responsible for quality at the rectory of UB also points out: *"the stakeholders[1] are perfectly identified in all the processes (...) the students (which are the focus of the teaching and learning process), the graduates, the companies, the employers and the customers of specialised services. And in a broader context, we must include the potential candidates (...), the families (...) and society in general"*.

[1] The interviewee refers to stakeholders and not to customers.

The interviewees often report that clients of the university are identified and that the university knows their needs. However, they find it difficult to explicitly state what is done to fulfil those needs.

Leadership

Leadership is related to the role of the management bodies in universities. They help define a university's mission, values and goals, promoting a quality culture and promoting the involvement of people and quality management.

The top management bodies have an important role in the definition of the QM policy of the universities and in the promotion of a quality culture and QM practices. The important role of top managers is recognised by all interviewees, who, in general, believe that they are the driving force of the QM systems. As we have seen, all universities have top management representatives responsible for the QM systems. In this regard, interviewees highlight the *"very positive role of the top management, especially taking into account the restrictions on the budget"* (Coordinator of the operational body for quality, UA). Indeed, *"every mechanism and tool developed and implemented (...) which improve the quality of the school are top-down. So the top managers who have been leading this process are very important"* (Coordinator of the programme of Informatics Engineering, UA).

Involvement of people

The involvement of people is translated into the efforts to involve the people working in universities (academic and non-academic staff and students) in the QM process.

The policy for QM promotes the involvement of people in the QM processes of the university. In practice, the student surveys are an example of the involvement of the students in the evaluation of the courses and of the academics. It is true that students are somewhat involved in the assessment of courses and academics, and that *"more and more they are called on to participate in different bodies"* related to the QM activities (Coordinator of the Operational Body for Studies and Planning, UA).

The academics also mention that they are not effectively involved in QM, since they are mostly asked to fulfil the requirements of the QM system: *"what I know about the system is mainly what the system asks me to do, regarding the courses that I teach or the programme that I coordinate"* (Coordinator of the programme of Informatics Engineering, UA).

The resistance of academics and students to the QM system and the lack of knowledge they frequently show about the system, make their involvement more difficult. Universities have been developing strategies to bring people in. In this context, UC developed *"clarification sessions, where the results were shown in diagrams, where we explained the relationship*

between the different stages of our planning. And when people understand, it is easier for them to participate" (Responsible for quality at the rectory). With the same purpose, UB *"had several meetings with pedagogic councils, programme directors, students (...), in the experimental stage of the internal quality management system*, produced *"flyers for students with information about the system"* (Responsible for quality at the Rectory). Academics, namely programme directors, try *"to draw students attention to the importance of the students"* and develop a work of *"information and awareness (...) about the importance of quality for their educational pathways"* (Vice-Director of the programme of Language and Literature).

UB and UC face a major problem; the response rates to the student feedback questionnaires are relatively low, which is a huge concern according to those responsible for QM in institutions B and C.

The discourse of the interviewees around the involvement of people is mostly focused on the involvement of the students, mainly through student surveys; and on the involvement of the academics, through the fulfilment of the requirements of the QM system. Therefore, the involvement of people seems to be more about the need to get information from the people, and less about their effective involvement in the QM process.

Regarding the involvement of people, the A3ES auditing reports convey the idea that the QM systems have mechanisms that stimulate the participation and the involvement of people. Our findings also acknowledge the existence of those mechanisms. Notwithstanding, the perceptions of the interviewees collected in our study allows us to identify two main signs of insufficient involvement. First, some of our interviewees show a lack of knowledge and information regarding the QM system, their functioning and about what is being done regarding QM at the management level. An adequate involvement of people would guarantee a good level of knowledge and information regarding the QM system. Second, our interviewees (across the three universities) complained that they wish to be more involved in what their institutions are planning and developing regarding QM.

Process approach

A process approach has to do with the management of the different missions of the university (teaching and learning, research and scholarship, third mission, and support processes) as processes, i.e. as a set of interrelated activities that turn inputs into outputs.

According to the QM policies analysed, the activities and related resources of the universities seem to be managed as processes. In general, the QM policies state that the universities systematically define the activities necessary to obtain a desired result; analyse

and measure the capability of their key activities; identify the resources and mechanisms that will improve their activities; and evaluate the role of internal and external stakeholders. The person responsible for quality at the rectory of UB emphasizes that the university, similar to the other two universities, defines: "*the responsibilities of the different bodies, the different organisational levels, the different processes of QM; the different processes of monitoring, control, discussion (...) and intervention in order to continuously improve; the participation of the different internal stakeholders (...) and external stakeholders; the assessment of the system itself, to achieve continuous improvement*".

In general, the discourses of the interviewees show a very optimistic scenario. However, as we have seen before, the majority of the processes are not yet integrated in the QM system, and consequently this optimistic view seems to be true more for the process of teaching and learning and not so much for the other processes of the universities.

System approach

A system approach is related to the management of the different processes, units and services of the university in an integrated way.

In UA, "*in the management council, all the processes and activities are represented: teaching, knowledge transfer, relationship with the exterior, and the other areas, such as financial management, the management of facilities and equipment, etc. (...) And what matters is to ensure that the school is being developed as a whole and that is how we have been thinking and acting, at the management level*" (President of the strategic body for quality).

In UB, "*the matrix structure (different from a disperse structure based in several faculties), and the centralisation in two campuses (...) contributes to the articulation between the different services (...), the work is more articulated, fluent and coherent*" (President of the student union, UB).

In UC, "*regarding the systemic plan, the university has no problems*" (Director of the School of Social Sciences), which is due to the "*organic and organisational structure of the university, with several units, which work together in a very easy* way" (Director of the School of Sciences and Technology).

Academics acknowledge that "*the university is thought of as a system*", but they doubt about its operation: "*whether it works as a system, as an articulated whole, is another question*" (Academic from the Informatics Engineering programme, UB). Furthermore, academics, mainly from UC, emphasise that the dimension, the dispersion and the diversity of scientific areas can sometimes make the articulation between different units difficult: "*the physical dispersion of the university (...) and the autonomy (or relative autonomy) of the*

schools (...) make it harder. Similarly, the different disciplines and the fragmentation are not favourable" (Academic from the programme of Education, UC).

From the discourses of our interviewees, we can conclude that there are differences between the rhetoric of the top managers, which is much more integrative and systemic, and the discourses from the other interviewees regarding the actual practice. In fact, the system approach appears to be more rhetoric than practice, i.e. it seems to be an approach that universities are trying to develop, but which is not yet in place. Moreover, as we have seen above, the different processes are not equally integrated into the QM system.

Continuous improvement

In practice, continuous improvement refers to the efforts of universities to constantly develop their quality.

The QM systems of the three universities are clearly based on the continuous improvement principle. In fact, the expression "*continuous improvement*" is frequently used by our interviewees: "*The university seeks to achieve continuous improvement: of our performance, of the performance of the programmes, verifying the results, through this important tool [the QM system] so that we can see the strengths and the weaknesses*" (Vice-President of the School of Engineering, UB).

In this context, some examples of continuous improvement are highlighted. At UC, "*each year, the programmes with lower results are warned and have to present an improvement plan, which is prepared by the programme director, and then goes to the school; the school director sends it to the scientific council, who analyses the improvement plan (...) then it is sent to the pedagogical council, and, finally, it is submitted to the assessment council of the university*" (Director of the School of Sciences and Technology, UC). In UA, "*some years ago, one of the criticisms of the students were the schedules, and they were modified, and another criticism was the public information area, and that led to changes and improvements in those areas*" (Coordinator of the operational body for studies and planning, UA).

In line with our study results, the contribution of the continuous improvement principle, integrated in the QM systems, to the quality of the activities and services is also highlighted in the A3ES auditing reports of the universities under analysis.

Factual approach to decision making

A factual approach to decision making, as the name suggests, means that decisions in universities are based on the analysis of data and information provided by different sources.

The different QM offices seem to be important information sources for decision making. They support the decision-making process of management bodies, through the development of studies and the analysis of the results that come out from the QM system.

In relation to teaching and learning, for example, any change to a course or to a programme in the three universities is supported in the results from the reports of the programme coordinators, and the results from the student questionnaires. Moreover, the change has to be validated by different bodies, such as the scientific and pedagogic councils, which also validates the articulation between the different organisational dimensions, as mentioned before. The president of the strategic body for quality in UA describes the procedure, which seems to be similar to those developed in the other universities: *"once all the results from the questionnaires are collected, they are treated and there is an executive commission of the Pedagogic Council, which integrates academics and students, and where the problematic situations are identified. Then, there is a meeting with the programme director and the academics in question in order to have their feedback (...) so that a decision can be made not only based on the students' opinions (...) having the feedback of all the people involved"*.

Mutually beneficial supplier relationships

The principle of mutually beneficial supplier relationships in practice is seen through the concern universities show for developing relationships with suppliers. In a broader sense, and as we understand it, this refers to the external stakeholders. This is in line with the new ISO 9000 standards (ISO, 2015), where stakeholders may refer to parents, secondary schools, future employers, local community and the society as a whole.

The policies of the three universities for QM emphasise the participation of the most relevant stakeholders for the university in its processes of strategic planning.

In general, our interviewees highlight that secondary schools (which provide the future students), companies (where the students develop their work, their internships and their theses), alumni, and other external stakeholders, are important elements. At UB, the *"relations with external stakeholders are one of the strengths of the university and an area the university has been working on"* (Academic of the programme of Language and Literature, UB).

Although the relationships between the external stakeholders and the universities are clearly important for the QM system, those relationships seem to be still part of a developing dimension, mainly in UC. The person responsible for quality at the rectory of UC states: *"I would say that it is an area where we should invest. And this need is already identified and we are creating working groups in order to identify the mechanisms to improve this area. The dimension of influence and interaction between the university and the region is highly*

significant. But it does not have yet the mechanisms to support it." The director of the programme of Informatics Engineering adds: *"each area (secondary schools, companies, employers) works independently and there is not an integrative vision about the relationships with the exterior, from the quality point of view."*

Additionally, as mentioned before, our analysis of the third mission found that some of the interviewees were not clear that the relationships with the external stakeholders are part of the QM system. An academic from the programme of Informatics Engineering in UA claims that: *"in terms of the monitoring/ control in that area, I am not sure if it is done and how."*

Again, our results are in line with the A3ES auditing reports, which show that the universities could improve the involvement of external stakeholders.

Quality management as a strategic and integrated element in the overall management and governance framework

QM is referred to as a crucial area in all the universities. This has been driven by internal factors, such as the will of the institutions to develop mechanisms to improve their activities' quality, but also by external ones, namely by A3ES and by the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). Universities emphasise that *"concerns with improvement were always present in the institution"* and that a sign of those concerns was the participation in the first auditing exercises of their QM system: *"we have always been at the forefront in these topics"* (Coordinator of the strategic body for studies and planning, UA).

The interviewees also highlight the role of A3ES and of the ESG, stating: *"A3ES has played a decisive role (...) A3ES alerts to the importance of the interaction with these tools [from the QM system]. It is now a matter of time"* (Director of the programme of Education, UC). *"Another aspect which should be pointed out has to do with the European standards. Despite not being a bible, which has to be followed religiously, they are very useful"* (Responsible for quality at the rectory, UB).

In this context, the three universities developed not only operational structures for the coordination of the QM area (such as quality offices), but have also created strategic bodies (with top management representatives and other internal stakeholders) and top management representatives for QM (such as vice-rectors for quality), which seems to indicate that QM is defined as a strategic area. In addition, the results from the QM practice seem to be used as tools for the strategic management of the universities to assure that the results of the assessment of the different processes and areas of the universities are used to inform the decision making process.

As such, QM is to some extent being integrated in the broader management and governance framework of the university. This integration is emphasised by the majority of the interviewees, from top managers to academics, pointing out that the existence of a Vice-Rector, a Pro-rector, or specific structures for quality evidence that integration: *"We have the perception that QM is integrated and that the university confronts it as a necessity"* (Academic from the programme of Education, UC).

It seems that at present what exists is mostly articulation between specific bodies responsible for the coordination of their QM area with top management representatives, and the use of the results from the QM activity for the decision making process. However, the fact that universities have created strategic QM bodies with top management representatives, instead of quality management being dealt with by existent management and governance bodies questions to what extent there is full integration.

Discussion and conclusions

Our research aimed to understand whether the QM systems of universities cover their main processes, their organisational levels and the different QM principles; and whether they are being integrated in the broader management and governance framework of the universities. To answer our research questions, we undertook a national case study, including three embedded cases of different Portuguese universities; these are paradigmatic cases because they have internal QM systems certified by A3ES.

Globally, our results show that the QM systems of the universities show signs of integration across their different processes, organisational levels and QM principles. In addition, they seem to some extent to represent part of the overall management and governance framework of the universities. As such, our case studies seem to follow the trend for integration of QM in higher education emphasised in the literature (Manatos et al., 2015, Rosa and Amaral, 2007, Srikanthan and Dalrymple, 2002, Srikanthan and Dalrymple, 2007).

In this context, European and national standards and guidelines for QM, and the A3ES in particular, have played a crucial role, as stressed by the literature (ENQA, 2009, Kohoutek and Westerheijden, 2014, Rosa and Amaral, 2014, Rosa and Sarrico, 2012, Veiga and Sarrico, 2014). In fact, academics in the cases studied have stressed the role of those European standards and the role of A3ES, stating that they were two central external drivers for the development of QM in their universities.

Furthermore, QM is defined in all the universities as a strategic area of activity and several efforts are being made to develop QM systems in compliance with the national and the European standards. In this respect, universities created specific bodies responsible for the

coordination of the QM systems, and the QM activities in general, and/or created structures more directly linked with strategic management. In fact, this is in line with previous studies based on the analysis of both self-assessment and external reviews of the internal QM systems of universities in Portugal (Cardoso et al., 2015, Tavares et al., 2015). One of the most important strengths of internal QM systems is related to aspects such as the existence of a policy, structures, regulations and tools for QM, denoting more concern with structural elements and formal procedures (Tavares et al., 2015).

The lack of significant differences between the three universities regarding their QM policies (as opposed to the QM practices, where some notable differences exist) may be explained by the fact that universities have applied for the certification of their QM systems, following similar patterns, standards and guidelines. Furthermore, the levels and dimensions analysed here are in the audit model of A3ES, which universities must follow in order to achieve certification. Eventually the attempt of universities to have their internal QM systems certified and, in this sense, to benefit from a 'lighter-touch' external quality assurance, contributes to the standardisation of the systems (Cardoso et al., 2015). Nevertheless, it must be said, that despite the fact that the QM systems of the different universities are quite similar, their level of development seem to differ: those of Universities A and B are more developed than that of University C (less developed). One of the explanations for this discrepancy is probably related to the absence of functioning pedagogic councils in the latter university, which are important bodies in the QM system.

However, QM practice seems to tell a different story, since there are some observed limitations regarding the integration of QM in the studied universities.

At the process level, the internal QM systems of the universities have started with teaching and learning, which is still the most developed process. The centrality of teaching and learning is also emphasised by other studies (Cardoso et al., 2015, Loukkola and Zhang, 2010, Sursock, 2011). There are signs that the universities are slowly approaching other processes, which may be explained by the strong influence of A3ES. In this sense, mechanisms to assess, monitor and improve research and scholarship, third mission and support processes are being developed, as is also evident in the auditing reports of A3ES.

The different processes are globally classified by A3ES as having attained 'substantial development'. However, the auditing report of UA highlights that 'the integration of research and development, inter-institutional collaboration with the community and support unities in the internal quality assurance system, considering a systematic, uniform and comprehensive approach, is more recent'. Similarly, it is acknowledged that in UB 'there is a contrast between the level of development of teaching and learning and the other domains.'

Only the auditing report of UC emphasises that the internal QM system 'covers all the missions of the university' with a 'high integration level between the different areas' despite the 'effectiveness of the internal quality management system being substantially diminished due to the continuous omission of the Pedagogic Councils'.

As such, our conclusion does not significantly differ from the conclusion derived from the A3ES auditing reports, when these refer that the integration of other processes in the universities' QM systems is less effective than teaching and learning, which is the primary and most addressed process by the universities' QM systems.

At the organisational level, the different organisational dimensions show signs of articulation, with the roles of the different levels (from the course to the institutional level) well defined. In contrast, the articulation and communication between the highest and the lowest levels is sometimes difficult. The difficulties in the system vertical articulation is one of the major 'complaints' from the internal stakeholders, particularly those without management functions and with lower levels of involvement in QM activities. Top managers seem to be aware of the importance of communication with other internal stakeholders for the success of the QM systems, but simultaneously seem to find it difficult to develop effective communication procedures.

Some of the QM principles seem to be integrated in the QM system; but there are important exceptions, namely the principles of customer focus, involvement of people, process approach, system approach and mutually beneficial supplier relationships.

Universities generally show customer focus, identifying their main customers and their needs – but they do not always convincingly show that they act towards satisfying those needs and expectations.

The involvement of people shows some limitations, as people generally seem to be called to give information to feed the QM system, but not necessarily to participate fully in the QM process itself (Cardoso et al., 2015). Despite the participation of the different hierarchical levels in the QM system and of their contribution to improvement actions (also acknowledged by the A3ES auditing reports), their involvement seems to be unsatisfactory. It seems clear, from the observed lack of knowledge and information, mainly from the internal stakeholders with low involvement levels in QM activities, that the involvement of people needs to be further developed.

The process approach is also more developed in teaching and learning, than in other areas of activity of the universities. Also for this reason, it can be concluded that a system approach has not been fully attained, since the different processes are not equally integrated in the QM system. Moreover, the system approach is sometimes hampered by the lack of communication

between the top management and the lower levels of the hierarchy in the universities. There are also relevant differences between an integrative and systems rhetoric from top managers and a more fragmented discourse from other interviewees.

Finally, the relationships with external stakeholders, despite being important in the three universities, are still not fully integrated in the QM system. QM regarding third mission also seems to still be a developing area. The study which analyses the external reviews on the internal QM systems of Portuguese universities also reaches a similar conclusion, signalling the participation of external stakeholders as a weakness of those systems (Tavares et al., 2015). The A3ES auditing reports, despite acknowledging a good level of participation of internal and external stakeholders, point out that the involvement of external stakeholders should be improved.

Integrating QM in the broader governance and management framework of the universities, shows two relevant signs: the existence of top management representatives in QM structures and the use of the results from the QM system for the decision making process of universities. The important role of top managers is generally recognised and they are considered the driving force of the QM systems.

Nevertheless, the very existence of separate bodies dedicated to quality management, albeit with people from other management bodies, including top management, is an indication of the lack of total integration. Furthermore, the discourses of top managers are not always in line with the discourses of other academics. In this sense, the QM practices implemented by academics on a daily basis are not always in line with the discourses of top managers who developed the QM systems in the universities. This problematic articulation between the top management bodies and the other levels of the university may also make it difficult total integration. In general, QM processes are very much centralised in the top management bodies of universities (Sarrico et al., 2013a, Cardoso et al., 2015).

We observe that the conclusions from our research are not always totally in line with the conclusions from the A3ES auditing reports, despite both analyses being based on similar dimensions. We consider that this 'mismatch' can be explained by three reasons. First, the way we understand the dimensions of analysis within the scope of the QM theoretical framework is sometimes different from the way the A3ES understands similar dimensions. For example, the A3ES understands the system's approach idea as a dimension of analysis that considers the need for the QM system to be taken as a whole. Nevertheless, our framework is based on the understanding of system approach as proposed by the ISO 9001:2008, meaning the management of the different processes, units and services of the university in an integrated way.

Second, our results are mostly based on the perceptions from different internal stakeholders, who did not have any particular interest in showing a particular positive scenario regarding the QM systems of their universities, which we believe did not happen when they were being assessed by A3ES.

Third, the time lag between the A3ES auditing (2012) and our research (2015) can also explain some of the discrepancies. If it is true that it is expected that over the years the QM systems will develop and consolidate, it is also true that over the years constrains and difficulties can arise, and that some of the QM policies which were envisaged, end up not being satisfactorily implemented.

We believe that our research contributes to a better understanding of QM in higher education and to the discussion of a trend concerning QM systems that seems to be characterising universities: the trend for integration.

We expect that our results will add to the discussion on the implementation of QM systems in universities, further contributing to the development of truly integrated approaches to QM in higher education. Indeed, we believe that only a QM system that includes the different processes, organisational levels of the universities, the different principles which underline the definition of QM, and which is fully integrated in the overall management and governance of universities, can contribute to improving the quality of the universities and their activities in general.

Our results revealed new dimensions: barriers were found to the implementation of the QM systems; and different perceptions were found between different types of stakeholders. Unfortunately, this research could not investigate this aspect more fully, but it should be studied in further research.

Moreover, it would be interesting to monitor the development of the QM systems of these universities in the next few years, in order to understand the breakthroughs and setbacks of the system.

Naturally, since our research is based on three case studies, it cannot be representative of other universities. For this reason, it would be interesting to understand what is happening in other Portuguese universities, and indeed in universities of other countries - how their QM systems are being developed and how they are preparing themselves (or not) for certification of their systems.

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Appendix 1. Interviewees

University	Type of Stakeholder		Function in the Institution
University A (UA)	Academics with management functions	Top management	President President of the Strategic Body for Quality and member of the Management Council
		Intermediate management	Director of the Informatics Services President of the Department of Informatics Engineering Coordinator of the programme of Informatics Engineering
	Academics without management functions		Panel of academics of programme of Informatics Engineering
	Non academics linked to QM activities		Coordinator of the Operational Body for Studies and Planning and member of the Strategic Body for Quality Coordinator of the Operational Body for Quality and member of the Strategic Body for Quality
	Students		Panel of students of the programme of informatics Engineering Member of the Strategic Body for Quality
University B (UB)	Academics with management functions	Top management	Responsible for Quality at Rectory University Administrator and Director of Informatics Services
		Intermediate Management	Vice-President of the School of Engineering Vice-President of the Institute of Arts and Human Sciences Coordinator of the programme of Informatics Engineering Coordinator of the programme of Language and Literature
	Academics without management functions		Panel of academics of the programme of Informatics Engineering Panel of academics of the programme of Language and Literature
	Non academics linked to QM activities		Coordinator of the Operational Body for Quality

	Students		Panel of students of the programme of Informatics Engineering Panel of students of the programme of Language and Literature President of the Student Association
University C (UC)	Academics with management functions	Top management	Responsible for Quality at Rectory Pro-Rector for the Informatics System and Director of the programme of Informatics Engineering
		Intermediate management	President of the School of Sciences and Technology President of the School of Social Sciences Coordinator of the programme of Education
	Academics without management functions		Panel of academics of the programme of Informatics Engineering Panel of academics of the programme of Education
	Non academics linked to QM activities		Member of the Operational Body for Quality
	Students		President of the Students Association and member of the Strategic Body for Quality Panel of students of the programme of Informatics Engineering Students of the programme of Education

Chapter 4. Conclusions

4.1. Main conclusions

In recent years, the rising awareness for quality management in higher education and the European and national developments towards the setting up of quality management systems in universities (Berlin Communiqué, 2003; ENQA, 2009) seem to go together with a trend towards a more integrative and holistic perspective (Horine & Hailey, 1995). There seems to be different 'signs' of integration, either in the literature, particularly in the adoption of a more integrative vision of quality management in higher education (Srikanthan & Dalrymple, 2002, 2004, 2005); or in the universities, which seem to be working in order to develop their quality management practices in an integrated manner (Rodman, Biloslavo, & Bratož, 2013; Rosa, Saraiva, & Diz, 2003).

Globally, our research aimed to understand the phenomenon of integration of quality management in higher education, looking for theoretical and empirical evidence.

A partially integrated approach to quality management in the literature

First, and in order to understand whether there is a trend in the literature towards a more integrative vision of quality management in higher education, we developed a systematic literature review.

Having in mind our concept of integration, as the development of quality management practices within organisations which are part of their global management systems, covering different processes, organisational levels and quality management principles, we aimed to understand: whether authors approach the quality of processes separately or in an integrated way; whether quality practices exist at the three organisational levels and whether they were articulated; and finally, whether the different quality management principles were approached separately or holistically.

From the systematic literature review, we can conclude that the research is mainly focused on teaching and learning. However, and despite the fact that we cannot find many articles integrating the four processes, there are articles integrating more than one process and emphasising the need to integrate different processes (Sellers-Rubio, Mas-Ruiz, & Casado-Díaz, 2010).

In addition, and considering the organisational level, there is a focus on the broader levels of the organisational structure, mainly on the institutional level. One can find the integration of

other levels in the same articles but it is rare (Bender & Siller, 2006; Doherty, 1993, 2008; Owlia & Aspinwall, 1996).

Finally, regarding the quality management principles, there are several articles approaching several principles. Those focusing on holistic and comprehensive approaches even integrate all the quality management principles (Becket & Brookes, 2006; Srikanthan & Dalrymple, 2002).

Globally, we observe that the literature is developing holistic approaches to quality management. It appears to be connected with the discussion and development of quality management frameworks (Rosa et al., 2003; Srikanthan & Dalrymple, 2002, 2005), which have mostly been imported and adapted from other industries. Such approaches are also associated with the implementation of national models, internal and external quality models, or accreditation systems (Doherty, 1993; Hergüner & Reeves, 2000; Rosa, Cardoso, Dias, & Alberto, 2011).

In addition, the literature emphasises the need for integration of quality management in the broader management systems of universities (Bagautdinova, Novenkova, & Sarkin, 2013), and for its approach as an integral part of their development (Dynan & Clifford, 2001) and of their strategic plans (Bender & Siller, 2006).

In this sense, the quality management literature seems to be approaching quality management practices in an integrated way, responding positively to our initial thesis statement.

However, it has not yet achieved the 'total' integration and has to define the next step in the drive for an effective integrative approach to higher education – ultimately helping improve quality in higher education, as similar integrative approaches have done in other organisational fields (Kaynak, 2003; Sousa & Voss, 2002).

ESG – still not a fully integrated quality management model

Following the same trend, the European Association for Quality Assurance in Higher Education promotes the European Standards and Guidelines for Internal and External Quality Assurance within Universities (part 1 and 2 of the European Standards and Guidelines, respectively) and for external quality agencies (part 3 of the European Standards and Guidelines). The European Standards and Guidelines appear as a reference model, providing guidance and assistance to European universities in their internal quality management systems and to agencies in their external quality reviews (ENQA, 2009; Prikulis, Rusakova, & Rauhvargers, 2013).

In this context, we aimed to understand whether this reference model is also an integrated one, which we believe it should be. Our goals were then to understand whether the European Standards and Guidelines address the four main processes of universities, the different organisational levels, the eight quality management principles, and whether they approach quality management as part of the broader management context of the universities.

In general, there are some gaps in the different dimensions of analysis: processes, organisational levels and quality management principles. Naturally, we were not expecting that all the dimensions were present in all the European Standards and Guidelines, but we would expect that overall the dimensions were addressed by the European Standards and Guidelines as a whole.

Taking into account the processes of universities, the European Standards and Guidelines have a particular focus on teaching and learning. Despite the support processes being substantially reflected in the European Standards and Guidelines, they are mostly related to processes which support teaching and learning. This is an important gap in the European Standards and Guidelines, which some European accreditation agencies are filling by introducing new standards and guidelines concerning research and scholarship, third mission and internationalisation, as is the case with A3ES in Portugal (Santos, 2011).

As far as the organisational structure is concerned, the European Standards and Guidelines cover mainly the micro and the macro dimensions (i.e., programme and institution), and poorly the intermediate level of the constituent units. The European Standards and Guidelines do not seem to take into consideration how institutional policies and practices are translated and deployed until they reach the programme level.

The quality management principles are not homogeneously integrated in the different standards and guidelines. While principles such as continuous improvement, customer focus and factual approach, involvement of people, process approach and leadership are strongly addressed, the principles of mutually beneficial supplier relationships and of system approach are insufficiently treated in the European Standards and Guidelines.

In general, the European Standards and Guidelines highlight the importance of the focus on the customers of universities, of informed decisions on the decision making process, of continuous improvement, of a process approach, of defining the role of leadership, and of involving people in the quality management system. However, they attach less importance to the involvement of the external stakeholders in quality management and to the idea of a

system approach, i.e. the management of a university as a coherent and interrelated whole, as indeed its integration in the wider education system, as observed by Sarrico and Rosa (2016).

In summary, the European Standards and Guidelines seem to be a quality management model, and not only a quality assurance model, since they are based on planning, control, assurance and also on continuous improvement (ISO, 2015; Watson & Howarth, 2011). However, they do not seem to effectively work as global model to guide universities, in integrating all the core processes of universities, and in working more as a systemic quality management model and less as a collection of quality management practices.

The new version of the European Standards and Guidelines, published in 2015, do not seem to fill all the identified gaps, but they present an important development towards a more integrated quality management model and, more broadly, towards an integrated vision of quality management in higher education. By stating that "institutions should have a policy for quality assurance that is made public and forms part of their strategic management", the new European Standards and Guidelines emphasise the importance of integrating quality management into the broader management context of the universities (ENQA, 2015, p. 8).

A positive welcome to the ESG

After analysing the European Standards and Guidelines and understanding their degree of integration, we aimed to understand the perceptions of academics on the importance and actual implementation of the European Standards and Guidelines.

We conclude that Portuguese academics have positively 'welcomed' the European Standards and Guidelines, as other recent studies emphasise (Cardoso, Rosa, & Santos, 2013; Rosa & Sarrico, 2012), which somehow contradicts the scenario of resistance and scepticism to quality management models stressed by other authors (Harvey, 2006; Newton, 2002).

Thus, in general, academics consider that the European Standards and Guidelines are important for their universities, and believe that they are being implemented by their universities, to a certain extent, despite not knowing the standards so well.

This positive picture can be related to the European as well as the Portuguese legal frameworks, and the work of the A3ES, which act as facilitators in the implementation of quality assurance policy procedures (Rosa & Amaral, 2014; Sarrico, Veiga, & Amaral, 2013b).

Another plausible explanation for the positive results may be that the academics less committed to the quality management idea may be underrepresented among the respondents

to the questionnaire and, consequently, that the academics who answered the questionnaire are those who know, or at least are interested in, quality management and quality management practices in their universities.

Nevertheless, there are gaps between the knowledge of academics about the European Standards and Guidelines, what they perceive as important for quality management activities considered in the standards, and what is actually being implemented in their universities. Knowledge of the standards is lower than perceptions of their implementation, and these perceptions are lower than the perceptions of their importance. As the literature has been showing, the implementation of quality management practices – and of the European Standards and Guidelines in particular – is a problematic and complex process in universities (Loukkola & Zhang, 2010; Motova & Psykkö, 2012; Rosa & Amaral, 2014; Westerheijden & Kohoutek, 2014).

Still, this situation represents a favourable environment for the development of internal quality management systems in Portuguese universities since an implicit acceptance of the standards is more relevant than the explicit knowledge of them (Sarrico, Veiga, & Amaral, 2013a).

In addition, one can observe that the perceptions of the importance and the implementation of the standards vary between different groups of academics. Indeed, academics with different disciplinary affiliations tend to have similar perceptions of the importance of the standards but different perceptions of their implementation. Academics from private universities have more positive opinions of the importance and the implementation of the standards than academics from the public sector. Moreover, women seem to consider the standards more important and more implemented than men. Academics with a doctorate consider the standards less important and less implemented than academics without a doctorate. Finally, the perceptions of academics with high levels of involvement in quality management activities are slightly more positive, mainly regarding the implementation of the standards, than the perceptions of academics with low levels of involvement.

Important but not entirely satisfactory signs of integration in universities

In the last stage of our research, we developed a country case study in three "paradigmatic" universities, with certified internal quality management systems, and we aimed to understand whether the quality management systems of those universities cover their main processes,

organisational levels and the different quality management principles; and whether quality management is being integrated in their broader governance and management context.

For this purpose, we interviewed different internal stakeholders: academics, non-academics and students; and we analysed internal strategic and quality related documents from the universities as well as the external reports from the A3ES.

Globally, the universities are defining quality management as a strategic area and are developing their quality management systems in compliance with national and European standards. In this respect, universities have created operational bodies responsible for the coordination of their quality management systems, as well as strategic bodies more directly linked with strategic management, as previous studies already showed (Cardoso, et al., 2015; Tavares, Sin & Amaral, 2015).

Concerning the processes level, teaching and learning is still the most developed process, as emphasised by other studies (Cardoso, Rosa, & Videira, 2015; Loukkola & Zhang, 2010; Sursock, 2011). Notwithstanding, the audit model of A3ES which includes all the processes of higher education seems to be playing a major role in driving universities to gradually integrate research and scholarship, third mission and support processes in their quality management systems.

With regard to the different organisational levels and units of the universities, while the definition of the quality management policies follows a top-down logic, being mostly assured by top management and governance bodies of the institutions, the procedures for the assessment and monitoring of the different processes follow a bottom-up strategy, starting at the course level and ending in the institutional level.

According to the external assessment reports from A3ES, the bottom-up approach enables the continuous analysis of the results and the decision making process, and consequently the improvement of the different levels of the organisational structure. The analysis of the results by different basic units (departments and schools) also enables them to identify the needs for improvement or reinforcement of the standards and integrate them in their activity plans. In addition, the bottom-up approach, where each organisational level rules and acts on the reports which are produced by the previous levels, may mitigate situations which only aim to be in conformity with established procedures, and foster a proper reflection on the processes under review.

Nevertheless, if on the one hand, there seems to be an articulation between the different organisational dimensions in the sense that the roles for the different levels (from the course to the institutional level) are well defined; on the other hand, the communication between the highest and the lowest levels are sometimes difficult.

With respect to the quality management principles, the principles of customer focus, involvement of people, process approach, system approach and mutually beneficial supplier relationships are weakly integrated in the quality management systems of the universities. In this sense, the quality management systems seem to fail to: meet the customer needs and expectations; effectively engage their internal stakeholders; equally integrate their different processes; and fully involve the external stakeholders.

Regarding the integration of quality management in the wider management and governance framework of the university, the use of information originating in the quality management systems for decision making and the existence of top management representatives in quality management structures are very positive factors towards true integration. Still, the very existence of separate bodies dedicated to quality management, albeit with people from other management bodies, including top management, is an indication of the lack of total integration. In addition, the integration is more difficult due to the difficult communication between the top management bodies and the other levels of the university. Globally, the quality management process is centralised in the top management bodies of universities (Cardoso et al., 2015; Sarrico et al., 2013a).

Furthermore, the discourses of top managers are not always in line with the discourses of other academics. The quality management system described by top managers often differs from the ones described by the other academics, either because top managers tend to present a more positive image about the system, or because the other academics, who are less involved in quality management, do not have enough knowledge about the system. In fact, academics, students and non-academics highly involved in the quality management system tend to know better the system and to have a more positive opinion about it. Thus, a higher level of involvement in quality management seems to be linked to a higher level of knowledge regarding the quality management system and also a more positive opinion about it, which is in line with previous research (Bell & Taylor, 2005; Manatos, Rosa, & Sarrico, 2016; Newton, 2002; Rosa, Tavares, & Amaral, 2006; Stensaker, Langfeldt, Harvey, Huisman, & Westerheijden, 2011).

In general, there are not significant differences between the three universities, except for one university which stands out negatively in particular aspects and presents an overall 'underdeveloped' quality management system, when compared with the other two, probably mostly due to the bad functioning for a long period of time of important bodies for the system – the pedagogic councils.

Notwithstanding, the three universities present several similarities concerning the levels analysed here. We cannot forget that these universities have applied for the certification of their quality management systems, and thus had to respond to similar standards and dimensions. It is then not surprising that their quality management systems integrate the same levels, since most of them are related to the standards and dimensions they must fulfil in order to have their quality management systems certified by the A3ES, and benefit from a light-touch review of their study programmes (Cardoso, Rosa & Videira, 2015).

Hence, to some extent universities seem to be following the trend for integration of quality management in higher education emphasised in the literature (Manatos, Sarrico, & Rosa, 2015; Rosa & Amaral, 2007; Srikanthan & Dalrymple, 2002, 2007). In this context, the European and the national levels are playing and will continue to play a crucial role, as stressed by the academics in our interviews and by the literature (ENQA, 2009; Kohoutek & Westerheijden, 2014; Rosa & Amaral, 2014; Rosa & Sarrico, 2012; Veiga & Sarrico, 2014). However, we would say that, despite the positive signs of integration regarding the different processes, organisational levels, quality management principles, and the integration of quality management in the global management and governance context of the universities, they still have a way to go to reach the full integration.

A trend towards quality management integration in higher education: strengths and weaknesses

In sum, our research concludes that there is a trend towards quality management integration in higher education, at different levels: i) the literature is developing integrated approaches to quality management to a certain extent; ii) the European Standards and Guidelines are evolving towards a more integrated approach to quality management, and seem to be welcomed by academics; iii) the universities are also developing their quality management systems in an integrated manner. Nevertheless, despite a general trend towards integration, there is still a way to go before the integration of all the processes of universities, their organisational levels, the principles underlying the definition of quality management and, the integration of quality management in the broader governance and management context of universities. At the processes level, there tends to be a focus in teaching and learning. At the

organisational level, the articulation of the different levels is often difficult to achieve. At the quality management principles level, there are different principles which are absent in the literature, but mainly in the European Standards and Guidelines and in the quality management systems of universities, namely the principle of system approach which considers the integration of the different processes and an holistic and system approach to quality management, and the principle of mutually supplier relationships, which highlight the involvement of external stakeholders in the quality management systems of universities.

Hence, we believe that, the higher education sector, at the European, national and institutional levels, must design, plan and implement quality management in view of an integrated theoretical framework, as the one proposed in the present research, in order to effectively improve the activities of their institutions.

The need for the integration of quality management should however not be limited to the field of higher education.

Other areas of activity both in the public and private sectors can and should design their quality management practices taking into account an integrated approach, which considers their different organisational levels, their different 'processes' or 'areas of activity' and the principles of quality management, as indeed the quality management literature has been emphasising (Kaynak, 2003; Sousa & Voss, 2002).

4.2. Emerging dimensions

From the results of our country case study, one new dimension emerged. In addition to the main levels and dimensions comprising our framework of analysis, the different degrees of support, acceptance and resistance of universities' internal stakeholders to quality management emerged in almost every interview.

Although we could not explore, in the present research, the different standpoints of the academics and students regarding quality management, we consider that we should, even if briefly, address them here, and naturally, further develop an in-depth analysis in future.

In a way, our research already explored the perceptions of one of the groups of internal stakeholders – the academics – particularly regarding the importance and the implementation of the European Standards and Guidelines in their universities.

However, during the interviews, when academics, students and non-academics were being questioned about the integration of the quality management systems of their universities,

they often went beyond those topics and expressed their views and standpoints regarding the systems and the quality management idea, in general.

Indeed, the idea of quality management in universities tends to raise different degrees of acceptance, support and adaptation, which can play an important role in facilitating or hampering the implementation of quality management systems in these organisations (Cardoso et al., 2013; Newton, 2002). Moreover, the positions of universities' internal stakeholders are essential for the success of the implementation of the quality management systems in universities (Stensaker et al., 2011; Watty, 2006)

It is thus pertinent to discuss the perceptions of these stakeholders regarding the quality management systems of universities, in order to understand their degrees of support, adaptation or resistance and how far the perceptions regarding quality management vary according to the type of stakeholder, their degree of involvement with quality management and their position in the academic hierarchy.

The perceptions of the academics seem to differ mainly according to their involvement in the quality management system. On the one hand, those with low involvement in quality management activities tend to have less knowledge and a more pessimistic perception of quality management. On the other hand, those more directly involved in the quality management system seem to have a deeper knowledge of the quality management system of the universities and also a more optimistic view of such activities, as corroborated by the literature. It is well known from the literature (Rosa et al., 2006; Stensaker et al., 2011) that stakeholders' involvement in quality management relates to their degree of resistance and/or acceptance towards quality management. Hence, the (low or high) involvement in quality management activities can influence not only the acceptance, adaptation or resistance to quality management but also the level of awareness and knowledge of the quality management system in universities. The two seem to be connected, since a low level of awareness regarding quality management seems to be related to a more sceptical position.

The lack of awareness and knowledge of quality management seems to be, in turn, related to a gap in the communication between top managers who develop the quality management systems and the other academics who deal with them daily (Kleijnen, Dolmans, Willems, & Van Hout, 2011), and also to little involvement of academics in the development of quality management systems (Cardoso et al., 2013). Furthermore, we believe that the lack of knowledge regarding quality management, the gap in the communication between different hierarchical levels, and the little involvement of academics, can also explain the misalignment

between the discourses of the academics with different hierarchical levels and with different involvement levels in the quality management process, which our research already highlighted.

This is an interesting but not surprising conclusion. It is however surprising how, after so many years of quality management in universities and so much research on the topic, there is still a gap in the communication and information regarding quality management, which potentially hampers the implementation of effective quality management systems. It is surprising how universities and their management bodies have not yet been able to embed communication and information as key elements in effective quality management, which contributes to the improvement of the quality of universities and their processes. As stated by Mourad (2013, p. 361), it is crucial that those responsible for quality management have "the social skills to communicate effectively with faculty members and students."

These aspects represent some of the motives for the resistance of academics to quality management identified in our research. In addition, academics state that they should be focused on teaching and research and not on meeting the requirements of the quality management system (Newton, 2002). It seems that the academics view quality as "ritualism and tokenism" (Newton, 2002). They also consider that quality management activities aim to monitor and to control their activities rather than to improve them. In this sense, quality is seen as "suspicion of management motives" or "manifestation of managerialist control", monitoring and controlling the academic work and weakening the academic autonomy (Cardoso et al., 2013; Harvey, 2006; Newton, 2002). Some academics are also sceptical about student surveys as a proper instrument to assess their work, since students are not 'trained assessors' (Leckey & Neill, 2001; Nasser & Fresko, 2002).

Nevertheless, while academics express their resistance and highlight the limitations of the system, they also seem to "adapt" and "resiliently comply" to the quality management systems, meeting their requirements (Newton, 2002; Sousa, Nijs, & Hendriks, 2010).

Besides academics, students also show resistance, particularly in answering the surveys which assess the courses and their lecturers, either because they fear to be penalised, or because they do not understand the surveys' aims and doubt that they will change or improve their university and their experience as students, as previous research also indicates (Mourad, 2013; Stensaker et al., 2011). The lack of interest to participate in these surveys is also common among students. The low participation rates of students are a problem which universities are trying to solve, namely by adopting rewarding or penalising measures. In this regard, Mourad

(2013, p. 361) argues that “there should be an announcement of the recognition and reward system for student participation in quality assurance activities. The reward could be in the form of personal development, international exposure, training and support, financial payment.”

Consequently, and like previous research, our study indicates that despite the “rationale of providing students with better information on the quality of teaching and learning” behind most quality management systems, students seem to be the group with less information regarding quality in higher education (Stensaker et al., 2011, p. 479).

In general, the resistance to quality management systems in universities, mainly from academics and students, seems to be mainly related both to a lack of information and to a lack of communication regarding the quality management systems among the academics and the students with low involvement levels in quality management activities, which the present research have already demonstrated.

The results regarding non-academics also corroborate previous conclusions regarding the relationship between the involvement in quality management and a positive perception about it. All the non-academics in our research were highly involved in the quality management system and they tend to support the quality management systems of their universities, consensually perceiving them as “useful” and contributing to the “overall improvement of the university.”

Globally, it seems that the non-academic staff highly involved in the quality management systems support them and emphasise their importance. They also seem to be aware of the resistance of the academics and the reasons for it as well as of the need of a higher involvement, particularly of the students. Notwithstanding, they seem to have a more positive perspective regarding, not only the position of academics and students with respect to quality management, but also their participation and involvement in the system, than the position that academics and students effectively show.

In line with our main conclusions, which indicate that universities did not achieve the full integration of their quality management systems, the conclusions regarding our emerging dimension – the different degrees of support, acceptance and resistance of universities’ internal stakeholders to quality management – highlight the difficulties in involving, integrating and engaging universities’ internal stakeholders in quality management. The presence of the principle of ‘involvement of people’ is, then, compromised. As stated above, effective quality management integration can only be achieved when all the stakeholders participate in the

quality management system and when there is an effective communication between the different levels inside universities.

4.3. Research limitations and implications

The different stages of our research present some limitations, namely linked to the inherent methodological choices.

The systematic literature review has, from the start, a limitation associated with the systematisation process and the range of the research. The a priori definition of a research equation, and other inclusion and exclusion criteria, can inadvertently leave out some important articles. However, this limitation is part of the systematisation process, which is extremely helpful in delimiting the research in accordance with our goals.

With regard to the content analysis of the European Standards and Guidelines, we had into account the older version of the European Standards and Guidelines, which can be considered a limitation. However, we believe that the analysis of the new version of the European Standards and Guidelines would be particularly fruitful when the standards and guidelines have become more consolidated and better researched. Thus, a useful advance would be for further work to repeat this study with the new version of the European Standards and Guidelines.

A similar kind of limitation is transversal to the entire research and to its different stages, and is related to our framework of analysis. It has specifically to do with the quality management principles level. We used the old quality management principles (ISO, 2012) as reference for our framework of analysis, since the new ones (ISO, 2015) were not released when we first started our research. In this sense, we adopted the old quality management principles in all the stages of the research, in order to maintain consistency. However, we did not ignore the new principles and, where relevant, we analyse also our results in the light of these new principles, even if in a brief manner.

The survey developed in Portuguese universities in order to understand academics' perceptions on the importance and implementation of the European Standards and Guidelines has also limitations, which are mainly related to the methodology itself.

On the one hand, and despite we can assure the representativeness of the sample considering some characteristics of the population, namely gender, research area, sub-sector and academic degree, we cannot know who these academics are regarding their level of commitment to the issue of quality. For this reason, as explained above, we cannot know

whether the academics who answered the questionnaire are those who are more interested and involved in quality management activities, which somehow could justify the positive scenario regarding the importance and implementation of the European Standards and Guidelines in universities. A careful analysis of the results of our case studies and of the different degrees of resistance, acceptance and support of quality management by academics, which clearly suggest a link between involvement in quality management and positive opinion about it, makes us doubly convinced that the academics highly involved in quality management are over-represented in the survey.

On the other hand, surveys are limited in their ability to deeply understand the studied phenomenon. Consequently, our study is also limited in identifying the motivations for the perceptions of the academics. Nevertheless, the next stage of our research – the country case study –, despite not directly addressing the perceptions on the importance and the implementation of the European Standards and Guidelines and being limited to three universities, also aims to fill the gaps of this study. In this sense, it can help to understand, on the one hand, the deeper motivations from academics' perspectives on quality management in a broader sense; and on the other hand, the manner in which quality management is being implemented in Portuguese universities. To a certain extent, the brief analysis developed *a posteriori* to the resistance, acceptance or support of the internal stakeholders to quality management also fills this gap.

The last stage of our research has also a major limitation related to the case study approach. A case study approach has the advantage of enabling a deep understanding of the studied universities, but it cannot be representative of other universities. For this reason, it would be interesting to understand what is happening in other Portuguese universities, and indeed in universities from other countries, and how their quality management systems are being developed. Moreover, it would be interesting to monitor the development of the quality management systems of these universities in the next few years, in order to understand the breakthroughs and setbacks of the system.

We also must acknowledge that, although we have included in our research different internal stakeholders, with different 'positions' and 'experiences' in the 'organisational hierarchy' and in the quality management system, the analysis of the quality management systems and their level of integration based on perceptions has necessarily constraints. Although the internal documents of the universities as well as the external reports from the A3ES were also analysed, the conclusions drawn from here also present limitations, since they are more

accurate in determining the quality management policies of the universities than in explaining the quality management practices which the universities are actually pursuing and the quality management systems which universities are developing and implementing. Consequently, the triangulation of different sources of data, methodological strategies and data collection techniques are crucial to minimize similar limitations.

The choice of the three universities, to which we called paradigmatic, for having certified and, in principle, better developed and more integrated quality management systems can be debatable but can also be justified. On the one hand, if it is true that the certification of a quality management system does not have to be directly related to their level of development and integration, it is also true that the universities carefully 'prepare' their quality management systems in accordance to the national quality management models, and normally only apply for certification when their quality management systems are sufficiently solid. Consequently, we tend to believe that they are in fact well developed quality management systems. On the other hand, if it is true that the focus on three universities excludes other universities, potentially more interesting, and excludes private universities and universities of applied sciences, it is also true that it was never our intent to have a representative sample, but rather to develop a narrow and deep analysis of the phenomenon of quality management integration in higher education.

Despite the pitfalls and limitations in the different stages of our research, we believe that there are important research implications as well as relevant and original contributions to the knowledge about quality management in higher education, and especially about the phenomenon of quality management integration inside and outside higher education.

First of all, one of the main contributions of our research is the proposal of a theoretical framework for the study of quality management integration, in higher education, combining quality management as a scientific discipline and higher education as the field of application. The theoretical framework can be used in future research in higher education but also in other areas of activity, in the private sector, but more importantly in the public sector, where traditionally quality management has been less developed.

Second, the systematic literature review around the topic of integration is, as far as we are aware, the first study reviewing the level of integration of quality management in higher education. We believe that the discussion on the concept of integration could make an important contribution to the field of quality management. Quality management could be more integrated in the broader management context of organisations in general, and higher

education in particular (Sousa & Voss, 2002). In further research, it would be important to understand how the literature is evolving and whether the trend towards quality management integration tends to consolidate in higher education, and other areas of activity where traditionally that has not been the case.

Third, the content analysis of the European Standards and Guidelines taking into account the different levels and dimensions which should, in our perspective, be approached in order to reach an integrative and comprehensive view of quality management in higher education, also brings something new to the discussion around a crucial reference quality management model in the European higher education context. Perceiving and exploring the European Standards and Guidelines in the light of the concept of integration can shed light on the model and rethink how it can move towards a more integrative quality management model. It would be pertinent to monitor the evolution of the standards in this respect in future new versions.

Fourth, the survey on the importance and implementation of the European Standards and Guidelines aims to contribute to a better understanding of the influence of that model in the implementation of quality management practices in universities. It allows us to understand how academics are reacting to the practices that are established in the standards, and if they perceive their universities to be implementing those practices. The results may also be important for practitioners developing and implementing quality management policies and practices in universities, may give some clues as to which standards need more effort to implement in universities, and also determine the groups of stakeholders which deserve a special attention regarding their involvement and engagement in the quality management practices of universities.

It would be interesting to apply this survey when the European Standards and Guidelines, as well as the national guidelines for quality management, are more consolidated, in order to understand whether the perceptions of academics change. In addition, it could be valuable to extend the survey to other internal stakeholders: students and non-academic staff and to other European countries, developing a comparative study. It would also be interesting to carry out a similar survey for the standards and guidelines for the external quality assurance (Part 2 of the European Standards and Guidelines).

This survey together with the case studies further developed may also contribute to a better understanding of how quality management systems are being understood and implemented in universities and the role that European Standards and Guidelines are playing in the process.

Particularly, we believe that our country case study contributes to the discussion of a trend for quality management integration, which seems to be characterising universities. Moreover, we expect that our results contribute to the development of truly integrated approaches to quality management in higher education. We believe that the experience of the studied three paradigmatic cases can inform the development of quality management systems in those universities where quality management might be less developed. In addition, for the studied universities, the identification of possible shortcomings in their quality management systems may help them overcome them.

Indeed, in our view only a quality management system that includes the different processes, organisational levels of the universities, the different principles which underline the definition of quality management, and which is integrated in the global management and governance of universities, can contribute to improve the quality of the universities and their activities in general.

"The implementation of adequate [we would add, integrated, quality management systems] (…) by the institutions, in order to continuously improve their quality, rather than being mere bureaucratic and costly exercises to meet external performance evaluation exercises imposed on them, would have the double benefit of helping the institutions to pursue their chosen objectives, and being prepared to meet the requisites of the legitimate accountability exercises imposed on them by external stakeholders" (Sarrico, Rosa, Teixeira, & Cardoso, 2010, p. 41).

The next, relevant and also challenging step would be to empirically analyse whether integrated quality management systems in universities are actually contributing for the improvement of the universities and their processes. "In general, the question on the actual influence of (changes in) quality assurance and quality management at the level of higher education institutions on changes (improvements?) in education has not been answered definitely." Moreover, "the methodological problem is that quality assurance never appears in isolation, but is always bound to, for many reasons, an inherently rapidly changing context" (Westerheijden, Hulpiaub, & Waeytens, 2007, p. 309). In the end, more than planning, monitoring, control and assurance, quality management aims at improvement and enhancement, and the thorough and careful study of the actual contribution of integrated quality management systems for the improvement and enhancement of universities remains to be researched (Houston, 2010; Watson & Howarth, 2011).

Overall, this research aims to inform, on the one hand, institutional practices of universities which are developing and implementing their quality management systems; and, on the other

hand, the design of policies regarding quality management and the overall management and strategy of institutions, which should perceive quality management as part of the strategy of institutions and integrate it in their wider management context.

It would be also interesting to further explore the quality management practices in other fields, especially in public services, in order to understand which quality management models and systems are being designed and implemented and whether those models and systems are integrated ones, which levels and dimensions are being considered, and whether they are contributing for the improvement of the quality of the organisations and their processes.

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